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4. Family: **Satyridae.**

This family, which is very rich both in genera and species, is well distinguished by several characters not only in the perfect insect but also as larva and pupa, so that Satyrids are easy to recognise in all stages.

One of the chief characteristics of the butterflies consists in the basally swollen veins of the forewing. In most cases it is only the costal vein which shows this bladder-like thickening, in many cases the median likewise has it, but in some genera also the submedian, e. g. in *Oressinoma, Coenonympha,* and to a less extent in *Pierella.* The first three genera *Callitaera, Haetera* and *Pierella* have the submedian of the forewing, apart from the above-mentioned bladder-like thickening, also basally forked and form in this the transition to the Ithomias, which is also indicated by the partly thin, hair-like scaling and the transparency of the wings. Of the subcostal veins 2 mostly arise before and the rest behind the end of the cell of the forewing, but several genera differ in that the 2. subcostal vein only arises at the end of the cell or behind it. The middle cell of both wings in all the Satyrids is closed, the lower discocellular vein of the hindwing moreover in almost all the genera runs into the curve of the upper median; only in two of the first genera, in *Haetera* and *Pierella,* is this not the case. In *Haetera* the lower discocellular and the median meet at the origin of the middle median vein, in the genus *Pierella* on the other hand between the origin of the middle and that of the lower median.

The shape of the wings is rather variable. Sometimes both wings are rounded, sometimes only the forewing, whilst the margin of the hindwing is undulate or dentate. Often the forewing also shows angles at one of the radials, sometimes the apex of this wing is sickle-shaped or the costal margin itself is produced into a sharp point. Moreover sharper angles and points occur at the three median veins and at the submedian of the hindwing or the lower median vein is prolonged into a rather long tail (*Corades* and *Bia*).

The inner margin of the forewing in the greater number of species is straight or deviates but little from the rectilinear, only in the ♂♂ of the genus *Antirrhaea* and in one species of *Caerois* is it so much outcurved that the anterior part of the hindwing is covered by it. In this expansion is placed on the under surface between median and submedian the so-called scent-organ, consisting of a row of closely approximated, stiff hairs, which often form a semicircle or a wedge-shaped, pointed ellipse, the curly tips of the hairs bending over towards one another. In addition to the genus *Antirrhaea* the scent-organ is only found in the ♂♂ of the *Caerois*-species. In one species of this latter genus, however, it is placed close to the inner angle on the underside of the forewing, so that it is not covered by the hindwing. Tufts of hair are also found in the genus *Bia* on the upperside of the hindwing, smaller hair-pencils in some *Euptychia.* Perhaps these may likewise be regarded as scent-organs, as they only occur in the ♂♂.

The greater proportion of the species of Satyrids are above uniform dark brown, so that the markings are confined to the under surface. Here belong most species of the genera *Taygetis, Euptychia, Lymanopoda, Pedaliodes* and *Pronophila.* But all these genera show at the same time a number of species which are brightly coloured also on the upper surface and have striking and beautiful markings. On the underside the ocellated markings are represented in a variety of ways. Several species have also beneath larger or smaller silver spots or silver stripes and dots. Some Chilian species have the wings entirely silver-coloured above.

The antennae of the Satyrids are mostly thin and delicate, at the same time rather short, not reaching half the length of the forewing. The shaft widens very gradually into the little-thickened club, only a few genera have a short, broad club. The palpi are usually densely and strongly haired, sometimes the eyes are also hairy, the forelegs in both sexes aborted.

The eggs of the American Satyrids, as far as they are known, have a rather spherical or hemispherical form, with the sides ribbed or regularly divided by raised transverse ridges.

The larvae are spindle-shaped, thicker in the middle, narrowed towards each end, but the head in several species is thicker than the anterior segments, also sometimes with 2 short, obtuse horns above, in others also at the sides provided with conical protuberances on which are placed short bristly hairs. The smooth or finely granulated, spineless body terminates at the posterior end in 2 points, which are mostly straight, but sometimes also curved upwards. The colour is mostly green, but there occur also longitudinal stripes of various colours. They live on grasses, reeds, species of bamboo, sugar-cane and palms, remain hidden by day and come out at dusk to feed.

The pupae are comparatively short and thick, without strikingly projecting angles. They are either attached at the tail-end or lie free on the earth or are hidden under stones.

Many of the tropical Satyrids are dusk-butterflies, i. e. they remain at rest all day and fly about near the ground in the early morning and the dusk of evening with unsteady, sometimes jumpy flight in woods or thickets. Here belong the dark-coloured species of *Taygetis* and *Euptychia.* All day long we find single *Taygetis* in the dense timber-forests, resting with closed wings on the ground, where they can scarcely be distinguished from the dried foliage and are not noticed until they fly up. Herr Haensch, who has been kind enough to give me these notes on the habits of the Satyrids, for which I am much indebted to him, has observed that specimens when pursued lay down flat on the dry leaves on the ground and could then only be found by startling them up. The transparent species of *Callitaera* and *Haetera,* as well as the nearly allied *Pierella,* are always found in the shady timber-forests, mostly singly near the ground, and prefer the narrow foot-paths. When one comes near them, they rise at a distance of a few paces and fly along the path close to the ground, soon settling again, but only again to fly off on being pursued. In this way the weak-flighted insects may often be followed for quite a distance, until, leaving the path, they are lost in the wood. The least shy of light are the genera *Oxeoschistus, Lasiophila, Pedaliodes* and *Corades,* thus in general the most brightly coloured forms. These are frequently mountain species, occurring at elevations of over 2000 m. They are met with gregariously fluttering backwards and forwards on the road or feeding on the ground at the excrement of cattle and other foul substances, but always near to thickets, where they take refuge in danger. The species of *Corades* are not easy to recognize in a bush, as they rest on twigs with the wings closed after the manner of *Kallima.*

The Satyrids are distributed in America from the extreme south (Tierra del Fuego) to the arctic regions of the far north. Tierra del Fuego produces an *Erebia* and a *Cosmosatyrus,* whilst in the northern region occur, besides representatives of the genus *Erebia,* also of the genera *Coenonympha, Satyrodes* and *Oeneis.* In the high mountains of South America tbe Satyrids ascend to the snow-line and hence we find in Colombia, Ecuador, Peru and Bolivia even at elevations of over 4000 m. single representatives of the genera *Pedaliodes, Lymanopoda, Pseudomaniola* and *Cosmosatyrus.* Among these inhabitants of the mountains there are some species which are very local and only have a limited range of distribution. Hence on closer investigation of such remote, hitherto little explored districts new forms are still found.

1. Genus: **Callitaera** *Btlr.*

Delicate butterflies with thin body, transparent, thinly scaled, rounded wings, small, sparsely haired palpi, thin antennae, only a little thickened apically. The costal vein of the forewing is strongly swollen at the base, the median on the other hand but little, the submedian is basally forked. Two subcostal veins arise before the end of the cell, the upper discocellular is absent. In the hindwing in this and the 2 following genera the costal and subcostal veins arise from the base near together. The lower discocellular runs into the origin of the upper median vein. — The species are distributed over tropical South and Central America. They fly slowly and low in the early morning hours in dark timber-forests. Several of the species are very similar and all are of nearly the same size.

menander. **C. menander** *Drury* (= andromeda *F.* (pt.)) (42 a). Forewing with the margins narrowly dusted with brownish and 2 fine brown transverse lines, one running through the middle of the cell, the other across the discocellulars, but both extending from the costal to the inner margin. On the hindwing near the distal margin and apex a round black eye surrounded by a yellow and a brown ring and with a white pupil, which, however, is not placed in the middle but at the distal margin of the black part. The inner transverse line of the forewing is continued indistinctly on the hindwing, the outer one is somewhat broader and more band-like, forms on the anterior median vein a distally directed, acute angle and then extends to the hindmargin. The posterior part of the distal margin is narrowly edged with brownish and the space between it and the above-mentioned band is light rose-red, especially in the ♂. — Central America. Colombia.

pireta. **C. pireta** *Cr.* (42 a) is very similar to the preceding species and differs from it chiefly in having in the posterior half of the hindwing near the brown distal-marginal stripe a further brown submarginal stripe, which is not present in *menander.* All these stripes, marginal, submarginal and outer median, are covered, as it were, by the light rose-red colour. — From the Upper Amazon, Ecuador.

aurora. **C. aurora** *Fldr.* is similar to the preceding species, but according to the original discription is not marked with purple but pale lilac in the posterior part of the hindwing and is dusted with ochre-yellow, and also has the ocelli on the wings elongated. The figure of *aurora* in Staudinger's exotic work pl. 77 does not agree with this. This figure I regard as belonging rather to the following *aurorina; aurora Fldr.* occurs in Colombia and North Brazil. — *aurorina.* **aurorina** *form. nov.* (= aurora *Stgr.* nec *Fldr.*) (42 a). I give this name to the form similar to *pireta Cr.,* in which the light rose- or purple-red colour of the hindwing extends from the distal margin into the cell and nearly reaches the base of the wing. From Colombia and the Upper Amazon.

pellucida. **C. pellucida** *Btlr.* (42 b) is a species similar to *menander Drury,* in which the rose-red dusting is entirely absent. The brown marginal band and the similarly coloured submarginal band of the hindwing

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are connected by short brown stripes lying along the veins. There are 2 brown dots before the margin near the eye-spot. — Cayenne.

C. philis *Cr.* (= cissa *Hbn.*) (42 b). Very similar to the preceding species, but has the brown marginal and submarginal stripes of the hindwing somewhat narrower and the median area before these stripes sprinkled over with violet-blue dust, which, however, is laid on so thinly that the wing remains transparent, only in certain positions showing a very distinct blue reflection. Surinam. — **harpalyce** *Btlr.* is probably only a local form of the preceding, which has the blue reflection along the median veins specially distinct, and which in addition to the eye at the anterior part of the distal margin has also a small eye with a yellow ring between the middle and lower median veins. From the Upper Amazon. *philis.* *harpalyce.*

C. esmeralda *Dbl.* (The older name *andromeda F.* cannot be employed for this species, because Fabricius has mixed up several species together under this name.) Similar to the preceding species, but the blue reflection in the central area of the hindwing is wanting. Instead of this the posterior part of the distal margin is bluish violet, and at each side of the lower median vein is placed in this border a red-yellow ring with white centre. The eye in the anterior part of the distal margin is as in the other species. Between this and the two posterior ocelli there are 2 round white spots. Pará. — As **bandusia** *Stgr.* an *esmeralda*-form has been described in which instead of the two anal ocelli of the hindwing there are two reddish white spots placed in a large cyaneous spot. From the Rio Maues, a tributary of the Lower Amazon. *esmeralda.* *bandusia.*

C. pyropina *Godm. & Salv.* (42 b). Forewing without markings. Hindwing at the anal angle with broad, brownish violet distal margin which extends to the lower radial. In this are placed 3 rose-red spots and close to the margin a narrow rose-red stripe. The ocellus in the anterior part of the distal margin is as in the allied species, behind this is a white dot. — From Bolivia and East Peru. *pyropina.*

C. polita *Hew.* (42 b). The only species of the genus which shows on the hindwing no red or blue colour. The wings are shorter and broader than in the other species. Costal and distal margins of the forewing are narrowly brown, 2 half and 2 entire narrow brown transverse stripes traverse the forewing, whilst the hindwing has only a marginal and a submarginal band, of which the latter is strongly angled. The ocellus in the anterior part of the distal margin as in the other species. — From Nicaragua, Chiriqui in Panama, Costa Rica, Colombia, rare. *polita.*

2. Genus: **Haetera** *F.*

The butterflies are on an average somewhat larger than those of the genus *Callitaera,* but the wings are equally delicate and transparent, and the submedian of the forewing is forked at the base. But the costal vein of the forewing is less strongly inflated. The principal difference, however, consists in the position of the lower discocellular of the hindwing. This vein ends at the origin of the middle median vein. The 3 discocellulars are placed vertically and form almost a straight line, the apex of the cell being acute.

H. piera *L.* (♀ = anacardii *F.* nec *L.*) (42 c). Forewing diaphanous, without markings, only with narrow brownish costal and distal margins. Hindwing in and behind the middle with fine ochre-yellow dusting, with a fine brownish transverse stripe, which is strongly angled in the middle and whose posterior part in the ♀ is darker and more distinct, with brownish distal margin, which forms in the middle a somewhat obtuse angle. Before the distal margin anteriorly a larger and posteriorly a smaller black ocellus, the former with obliquely placed, the latter with centrally placed white pupil. Both ocelli have ochre-yellow iris and brown ring; between the ocelli 2 white dots. Common in Guiana and on the whole of the Amazon, extending to the south of Brazil. In the forests of the Cordilleras of Colombia common at elevations of 1200—2500 m. Flight very slow. The egg is spherical, somewhat flattened at the base, smooth, shiny white. — **diaphana** *Luc.* (= hymenaea *Fldr.*) is a form of *piera,* in which the ochre-yellow dusting on the hindwing is absent and the brown markings are more distinctly prominent. Bahia. — **negra** *Fldr.* is another, larger, form of *piera,* in which the brown submarginal stripe in the ♂ is effaced and the marginal stripe placed further from the margin. In the ♀ both stripes are narrower and the proximal one is more curved than in the type form. Rio Negro. — **unocellata** *form. nov.* (42 c), a hitherto undescribed local form of *piera,* has on the hindwing only the smaller ocellus before the anal angle. The other larger eye-spot at the apex is absent or only indicated by a black dot. The brownish submarginal band is only distinct in the posterior half of the wing and the space between it and the brownish distal margin is dusted with ochre-yellow at the anal angle. On the under surface the iris of the eye-spot is not red-yellow, but sulphur-yellow and twice as broad, the black centre on the contrary much smaller than above. Bolivia. *piera.* *diaphana.* *negra.* *unocellata.*

maclean-nania. **H. macleannania** *Bates* (= diaphana *Btlr.* & *Druce* nec *Luc.*) (42 c), a similar, somewhat larger species, with the wing-expanse 72—80 mm., which is distinguished by having the posterior half of the hindwing in the ♀ rose-red between distal margin and submarginal stripe. In the ♂ this rose-red colouring is only present in the obtuse angle in the middle of the distal margin. The brown submarginal stripe is mostly broader and more distinct than in *piera*, the eye-spots vary in size, sometimes in the ♀ attaining a diameter of 5 mm. The ochre-yellow dusting in the diaphanous part of the hindwing is absent. — Panama and Costa Rica.

hypaesia. **H. hypaesia** *Hew.* (42 c) is an easily recognized species, in which the broad dark brown submarginal band of the hindwing is united with the like-coloured distal margin, so that a marginal band of 4—7 mm. in breadth is formed, in which is placed in each cell a hyaline spot. On the forewing a narrow stripe of dark brown dusting runs from the discocellular to the inner margin. Above the eye-spots of the hindwing are not distinguishable, beneath on the contrary distinct, one between the 2 radials, the other close beside the middle median vein. Both are black with brownish yellow ring and white pupil. In many specimens the submarginal band is traversed by a row of brownish yellow lunules. — Common in Colombia, Ecuador, Peru and Bolivia at elevations of 1000—2200 m.

3. Genus: **Pierella** *Westw.*

The shape of the forewing is similar as in the preceding genera, but that of the hindwing different. The distal margin of this wing is in most species undulate, in some it is obtusely angled at the upper median vein, in *dracontis* it is produced into a point. Although the wings are more densely scaled than in *Callitaera* and *Haetera*, yet the scaling is not nearly so dense as in the following genera. The wings are therefore in all the *Pierella*-species still to a certain extent semitransparent although not altogether diaphanous. The principal distinctive character of the genus is here also found in the position of the lower discocellular of the hindwing. This reaches the median between the origin of the middle and that of the lower median vein, thus between M_2 and M_1. The costal vein and the subcostal of the hindwing arise separately at the base. The submedian of the forewing is furcate at the base. The ♂♂ have on the upperside of the hindwing in the middle of the inner margin a small oval spot, measuring 2—2½ mm., which is bare or covered with more deeply placed scales. In most species this spot is light coloured, in some with a dark central dot, but in *astyoche* it is dark brown, so that it is here easily overlooked. Only in *hortona* is it large, 10 mm. long and 3 broad, and of a light ochre-yellow colour. The size of the species varies between 55 and 75 mm. wing-expanse. The range of distribution extends over the whole of tropical America, some species reach South Brazil in the south and Mexico in the north.

a) With light, dark-bordered transverse band on the under surface of both wings.

nereis. **P. nereis** *Drury* (42 d). ♂ 62 mm., ♀ up to 72 mm. wing-expanse. Across the grey-brown, semi-transparent wings runs a straight, dull white, brown-bordered band, which in the middle of the hindwing is widened into a large, pure white spot. The distal half of the hindwing is red-yellow with 2 black, white-centred ocelli and 3 white spots. Distal margin darker brown. The ♀ has 1—3 white dots before the apex of the forewing. On the under surface the ground-colour is lighter, the red-yellow is clouded with grey, the white band is continued in a straight line to the inner margin of the hindwing, the brown distal margin is wanting, the eye-spots are only quite small and in the basal area of each wing there is a brown, shorter or longer line. — South Brazil, Rio de Janeiro. Common.

helvina. **P. helvina** *Hew.* (42 d) approaches the preceding species in the scheme of markings, though not in the colouring. Ground-colour dark brown, light band of the forewing dusted with brownish, the brown bordering broader. In the cell there are 2 brown transverse lines, of which the proximal one is continued to the inner margin, a third short line is placed on the discocellulars, before the apex a round black spot in a light circle with 2 white dots below it and one above. The basal area is brown to beyond one-third the length of the wing, rather straight-margined distally. Then follows a large, triangular, carmine-red area which extends from the costal margin nearly to the inner margin and also near to the distal margin. The latter is black-brown, at the apex with a black-eye-spot with white pupil, a white dot above it at the costal margin and a similar dot below it in the red area. On the under surface the forewing is as above, only lighter. On the likewise lighter hindwing in the basal area three straight, brown, parallel lines run from the costal to the inner margin. Immediately behind the third line follows a reddish grey band, likewise traversing the whole wing, which in the middle is almost twice as broad as at the costal and hind-margins and is bordered at the distal side by a fourth brown line. Distal margin brown, the eye-spot smaller than above and with ochre-yellow ring, one white dot before and two behind the eye. — Muzo, Colombia.

incanescens. **P. incanescens** *Godm. & Salv.* (42 d) only differs from *helvina* in having the proximal border of the red area of the hindwing 2—3 mm. behind the end of the cell, whilst in *helvina* it runs right across the tip of the cell. The red colouring is placed more distally and posteriorly and encloses two white dots; the brown distal margin is narrower. Distributed in Central America: Chontales in Nicaragua; Irazu and Santa Clara Valley in Costa Rica; Chiriqui, Chepo and Bugaba in Panama. Common at the last-named locality. *ocreata.* — **ocreata** *Godm. & Salv.* is another form, in which the red area of the hindwing is much reduced. The anterior part of it is replaced as far as the median by a large, white, elongate-quadrate spot and the white dot below the black eye-spot is somewhat larger. The brown distal margin is as broad as in *helvina.* This form has a restricted range in Panama, having been found at Calobre and Lion Hill. It is still very rare in collections. *hymettia.* — In **hymettia** *Stgr.* (42 d), a further form similar to *helvina,* the red area of the hindwing is still more reduced, being at a distance from the inner margin and broken up. In the figured ♂ it consists of 3 parts, a spot in the middle of the wing of 12 mm. in length and 6 mm. in breadth, a small round spot in cellule 4 and a red dot below it in cellule 3. In the ♀ all the 3 parts are united into a larger spot. At the middle of the costal margin there is a white spot, which, however, is only half as large as in *ocreata,* only extending to vein 6. The ground-colour of this form is above and beneath dark brown, almost black-brown. From the Rio Dagua and Rio San Juan in West Colombia. Flies in August.

astyoche. **P. astyoche** *Erichs.* (= larymna *Dbl.*) (42 e). Ground-colour brown, 2 parallel, straight, dark brown transverse lines run behind the middle across both wings from the costal to the inner margin. They enclose no lighter band above. This is only present on the under surface, the space between the lines being here filled with whitish grey. Forewing with 2 further dark brown lines in the cell and a third on the discocellular, the hindwing with a similar line in the cell. Two black ocelli with white pupil and yellow iris in cellules 5 and 6 near the distal margin of the hindwing. Somewhat further removed from the distal margin in cellules 2, 3 and 4 three small round white spots with obsolescent dark bordering. The same markings are present on the under surface, only the ground-colour is somewhat lighter. From Guiana and the Amazon. *lucia.* — **lucia** *Weym.* (Stett. Ztg. 1885, p. 285) (= astyoche var. albomaculata *Stgr.*: Exot. Tagf. p. 219, pl. 77, 1887) (42 e) is a form of *astyoche* in which instead of the 2 lower small white spots of the hindwing there is a large white spot close to the distal margin, otherwise it is quite similar to *astyoche.* From Pebas on the Upper Amazon.

lena. **P. lena** *L.* (42 e). The forewing on both surfaces resembles *astyoche,* but the hindwing shows in the distal half 4 rows of blue spots mostly with white centres, of which the row next to the distal margin is somewhat obsolescent. Between the 2nd and 3rd rows near the costal margin 2 black eye-spots with white pupils. In the ♀ the basal half of the hindwing is shot with blue. Also the underside of the hindwing is similar to that of *astyoche,* except that the eye-spots are larger and removed more proximad and the proximal part of the distal margin is dark brown. Surinam, Guiana, Amazon, north-eastern part of Rio de Janeiro. *brasiliensis.* — **brasiliensis** *Fldr.* is an unimportant local form of *lena,* in which the ground-colour of the hindwing is more blue-grey and the bluish white spots are replaced by dirty white ones. From the Rio Negro and the Amazon. *glaucolena.* — **glaucolena** *Stgr. i. l.* (42 e) is a local form in which the blue spots of the hindwing are somewhat larger and have no white central dots. Only the spots placed next to the costal margin are somewhat white at the sides. From Mapiri. *amalia.* — **amalia** *Weym.* (Stett. Zg. 1885, p. 285) (= leucospila *Stgr.*: Exot. p. 220, 1887) (42 e) is a form which Hewitson figures in the 2nd volume of his Exot. Butterflies as a variety of this species. The bluish white spots of the first and second rows are united in the posterior part of the hindwing into a large white spot, in the anterior part of the wing these 2 rows of spots are absent. The 4th row close to the distal margin consists of round pure white spots, instead of the elongate bluish white ones of typical *lena.* Moreover on the upper surface of the forewing there is a distinct white band in the female. From Pebas on the Upper Amazon.

dracontis. **P. dracontis** *Hbn.* (? = hyalinus *Gmel.*) (43 a) is very similar to *lena* in the scheme of markings, but the shape of the hindwing is different. The distal margin is produced into a strongly projecting angle at the upper median vein. Hence this species forms a transition to the genus *Antirrhaea.* The 3 rows of blue spots on the hindwing are more brightly coloured than in *lena,* the 4th row at the distal margin is absent. From Surinam and the Amazon. *extincta.* — **extincta** *Stgr. i. l.* A form in which the greater part of the light band on the underside of the forewing is wanting, only the part from the inner margin to the lower median vein being present. On the hindwing the half-band of *dracontis* is divided into 2 parts and the posterior ocellus is extremely small. From Manicoré.

b) Without light band, but with three straight, almost parallel, dark lines on the under surface of both wings.

luna. **P. luna** *F.* (= pallida *Godm. & Salv.*) (43 a). Both wings grey-brown, the hindwing somewhat darker in the posterior half, both with 3 fine, brown, almost straight transverse lines, of which the one

placed next to the base on the hindwing is rather indistinct. At the apex of the hindwing two round black spots, of which the anterior one has a white pupil towards one side, but the other is blind and smaller. On the lighter under surface with fine brown striae the transverse lines are more distinct than above, between the 2nd and 3rd on the forewing there is a fourth, which only extends to the upper median vein. The ocellus of the hindwing is smaller, the black spot is absent. In the marginal area there are 4 white dots on each wing. In the ♂♂ above seen in a certain light there is a light green reflection,
heracles. in the ♀ the marginal area is darker. Nicaragua, Costa Rica, Panama, Colombia, Guiana. — **heracles** *Bdv.*
(= rubecula *Godm. & Salv.*). A northern form with the same green reflection on the forewing in the ♂, but distinguished by the reddish brown colour of the costal area on the hindwing above. This colour is gradually merged at its edges into the dark brown ground-colour. The dark brown distal margin is 5—6 mm. in breadth. The 2 black ocelli at the apex are placed at the boundary of the two colours and
lesbia. have often white pupils. From Mexico and Guatemala. — **lesbia** *Stgr.* (43 a) I regard as a southern form
of *luna*, which approaches *heracles.* The median patch of the hindwing, however, is more reddish yellow and more distal than the reddish brown patch of *heracles.* The dark brown distal margin is only 1—1½ mm. in breadth and rather sharply defined. Of the 2 round black spots at the apex only the upper one has a white pupil. Under surface as in *luna* and *heracles.* From Bucay in Ecuador and the Rio San Juan in West Colombia.

rhea. **P. rhea** *F.* (43 a) approaches *luna*, having the same markings and the green reflection on the forewing, but the ground-colour is more yellowish brown, the hindwing somewhat darker than the forewing. The former with a row of 5 black ocelli with white pupils, of which the 3 posterior ones are somewhat smaller and the last is often very indistinct. On the under surface the brown lines are as in *luna*, but the eye-spot at the apex of the hindwing is absent, on the other hand the row of dots (2 or 3 on the forewing, 5 on the hindwing) is very distinct. From the Amazon; Rio de Janeiro.

lamia. **P. lamia** *Sulz.* (= dyndimene *Cr.*) (43 a) is similar to *rhea*, the green reflection is likewise present in the ♂ on the forewing, but the hindwing has a steel-blue gloss, which is absent in *rhea*; the 5 black eye-spots are all equally large and distinct, the white dots in them somewhat stronger. From Cayenne, Surinam, Colombia.

chalybaea. **P. chalybaea** *Godm.* was described as similar to *lamia*, but differing from it in that more than the basal half of the hindwing in both sexes is shot with steel-blue, the black rings round the white dots are almost or entirely absent, the distal margin of the hindwing is very broadly darkened and the 2 central lines are indistinct. From Chapada in Brazil.

hyceta. **P. hyceta** *Hew.* (43 b). A beautiful species. The forewing is similar to that of the preceding species in colouring and markings, and also shows the green reflection on the ♂♂ in certain lights, but the hindwing has reddish ochre-yellow ground-colour, only the base and costal margin agreeing with the forewing. Of the 3 brown lines on both wings the middle one on the hindwing forms roughly the indistinct boundary of the two colours. Four, occasionally five, round black spots form a submarginal row, only the anterior one has a white pupil, the 2nd is the largest. Between the 2nd and 3rd is sometimes inserted a fifth spot (as in the ♀-example figured). At the distal margin of the hindwing are placed brown triangles. On the under surface the ground-colour of both wings is yellowish grey, finely mottled with brown, the straight brown lines stand out distinctly, the black spots are much smaller than above, and have here in the ♀♀ white pupils, sometimes also in the ♂♂. From the Upper Amazon, Cuzco in Peru (3000 m.),
latona. Bolivia. — **latona** *Fldr.* is a form of *hyceta*, in which the central area of the hindwing is deep red-
yellow and the distal margin blackish, moreover the two posterior black spots are larger and have no white pupils. In the ♀ all the spots are larger and provided with white pupils. The under surface is as in *hyceta*, but the anterior spots of the hindwing are smaller and with white centres. From Bogotá
ceryce. (Colombia). — **ceryce** *Hew.* (43 b), likewise a form of *hyceta*, in which, however, the central area of the
hindwing is red-brown and the black-brown distal margin has a breadth of 8—10 mm. In the latter are placed in the ♂♂ 4, in the ♀♀ 5 black ocelli with white pupils. Moreover, the ground-colour of the forewing is darker than in *hyceta*, hence the dark brown lines stand out less, as is also the case on the hindwing. The ♂ has the same green reflection in the middle of the forewing as *hyceta*, whilst the ♀ bears 3 white dots before the apex of this wing. The under surface is grey-brown, darker in the marginal area, with 3 fairly straight brown lines on both wings, 4 or 5 white dots instead of the eye-spots on the hindwing and some similar dots at the apex of the forewing. A black dot at the base of the forewing and 2 or 3 at that of the hindwing. From Pintuc in Ecuador (800—1000 m.), Chanchamayo in Peru, and Bolivia.

c) With three almost straight, parallel dark lines only on the underside of the hindwing. On the upperside a blue spot on each wing.

hortona. **P. hortona** *Hew.* (43 b). Ground-colour dark black-blue. The blue spot of the forewing is elongate, varying in size, 3—4 mm. broad and 6—12 mm. long, and is placed on the discocellular. That of the hindwing is much larger, nearly round, 10—13 mm. in diameter, and extends nearly to the costal margin. At the inner margin of the hindwing there is in the ♂♂ a patch of light ochre-yellow, appressed scales 10—12 mm. in length. Under surface yellowish grey, on the forewing with 2 brown lines, contiguous in the middle and diverging anteriorly and posteriorly, and with a short oblique line in the cell, and 3 black dots near it. On the hindwing there are 3 black dots basally to the 3 almost straight parallel transverse lines and before the distal margin a row of 5 similar dots. Amazons and Ecuador. — **hortensia** *Fldr.* is a local form which is distinguished by narrower wings, smaller blue spots on the forewing and less rounded spots on the hindwing, which are placed further from the distal margin. From the Rio Negro. *hortensia.*

4. Genus: **Antirrhaea** *Hbn.*

Medium-sized and large butterflies of 65—105 mm. in expanse, mostly dark-coloured, only a few having blue, white or red-yellow markings. The palpi are densely covered with stiff hairs, the antennae thin, thickened towards the end, without distinct club. In most species the veins of the forewing are not swollen, only in *archaea* the costal vein is somewhat thickened and in *hela* distinctly swollen. In the hindwing the costal vein does not arise direct from the base, as in the preceding genera, but on a common short stalk with the subcostal. The precostal also arises at the point of separation of these veins. This is likewise the case in all the following genera of Satyrids. The principal distinguishing character of *Antirrhaea* consists in the scent-organ of the ♂♂, a brush of hairs on the underside of the forewing between median and submedian. This differs in size, shape and position in the individual species, being mostly basally pointed, anteriorly and distally rounded. The hairs are glossy, 3—4 mm. long and have the tips bent towards one another. In most species the scent-organ stands out before the costal margin of the hindwing, in single cases, e. g. in *geryon*, it even remains hidden if the forewing is much brought forward in setting. In consequence of this brush cellule 1 b is very broad between median and submedian, up to 12 mm., and the submedian and inner margin are semicircularly curved posteriorly. In the female the scent-organ is absent and the submedian and inner margin of the forewing are straight. The genus is distributed from Guatemala to South Brazil through Central and South America.

a) In the ♂♂ the subcostal and upper radial of the hindwing arise near together but separate out of the anterior margin of the cell. converge somewhat for a short distance and then diverge strongly. Hence the upper discocellular is short and only reaches $^1/_6$ to $^1/_4$ the length of the middle discocellular. The inner margin of the forewing in the ♂♂ deviates 2—4 mm. from the rectilinear. In the ♀♀ subcostal and upper radial diverge from the point of origin. Apex of the forewing rounded. Hindwing with obtuse angle at the middle or upper median (*Anchiphlebia Btlr.*).

archaea. **A. archaea** *Hbn.* (= girondius *Godt.*) (43 d). The genus *Antirrhaea* was founded on this species. The ♀ is very similar to the figured ♂, except that it has the inner margin of the forewing straight. On the under surface, which is striated with yellow-brown and white-streaked, there are only small white dots instead of the eye-spots. The scent-apparatus of the ♂♂ consists of a semicircle of yellow-brown, dense hair, 3—4 mm. long, placed close above the submedian, the hairs directed anteriorly and with the points bent towards one another. The length of this brush is 10—11 mm. Opposite to the scent-organ on the upperside of the forewing there is an oval spot of flattened scales, which is the same colour as the ground, and hence may easily be overlooked. According to WILH. MÜLLER, who has obtained the young larva from the egg, but was not able to rear it, as it would not touch the grasses, etc., placed before it, the egg is semicircular, the surface divided by raised ridges into regular, hexagonal areas. The body of the larva when first hatched is 3.8 mm. long, the tail-fork with the terminal bristle 2.7 mm., thus proportionately very long. Head large, black, rugose, covered with bristles, above with a bipartite process. Body thinner than the head, white with red-brown prothorax and brownish or reddish dorsal and lateral lines. The tail-fork is black. Widely distributed in Brazil: Bahia, Espirito Santo, Santa Catharina, Rio Janeiro.

taygetina. **A. taygetina** *Btlr.* Similar to the preceding species, but somewhat smaller, with only 2 smaller ocelli on the forewing, whose pupils are shifted distad and which are placed in the ochre-yellow band. Sometimes there is further a third very small ocellus at the costal margin. Ground-colour brown-grey; hindwing in the distal half dark brown with 2 to 4 light blue or light violet spots. Beneath light ochre-yellow, sometimes rose-reddish with 2 brown median lines, diverging at the costa of the forewing, of which the outer one is distally margined with white, with an indistinct, undulate, brown submarginal line and 5 white dots on both wings in an angular row. From Massauary, Teffé, Coary and Pebas on the Amazon. Rare.

hela. **A. hela** *Fldr.* (43 b). Upper surface dark brown. The forewing has before the apex 2 white spots with blue rings and in the posterior half of the wing 3 blue spots, of which the first 2 have white pupils. All 5 spots are placed in a row. In the neighbourhood of these spots the dark brown ground-colour has a blue reflection. Hindwing without markings. The under surface is grey-brown, finely striated with dark brown, and has a slight violet reflection. The scent-organ of this species is elliptical in form, with one side pointed. This proximal point is placed in the angle of the submedian. The scent-organ is 13 mm. long and 6 mm. broad. The rather stiff hairs are placed close together at the margin and radiate inwards, so that their tips meet over the middle of the ellipse. Only the basal half of the anterior margin of the ellipse is free from these hairs. The hairs themselves are 4 mm. long, light yellowish brown, darker brown at the tip. Opposite to the scent-organ is placed on the upperside of the forewing a wedge-shaped patch of flattened scales. From the Upper Amazon, Ecuador and Peru. Rare.

ornata. **A. ornata** *Btlr.* Expanse 75 mm., thus somewhat larger than *hela.* Violet-brown. Forewing with a row of 4 large, connected, round, black ocelli with rather large white pupils and ochre-coloured bordering. Hindwing with a curved continuous row of 5 large oval blue ocelli which have fine white pupils and are placed in thick black rings. This row is likewise surrounded with ochre-yellow. The under surface is ochre-yellow, finely striated with brown. The obtusely projecting angle of the hindwing is placed on the upper median vein. Only the ♀ is known. Cayenne. Rare.

b) Subcostal and upper radial of the hindwing in both sexes arise far apart and divaricate. Upper discocellular half the length of the middle one. Inner margin of the forewing in the ♂♂ only deviating 2—3 mm. from the rectilinear, in the ♀♀ quite straight. Apex of the forewing rectangular. Hindwing running out to a point on the upper median, obtusely angled on the middle and lower median.

geryon. **A. geryon** *Fldr.* (43 c). Expanse 85 mm. The distal margin of the forewing is almost straight, the greatest bend of the inner margin in the ♂ lies somewhat before the middle and only attains 2 mm., in the ♀ the inner margin of the forewing is straight. Ground-colour brown. Three large black eye-spots measuring 5—6 mm., with white pupils 1 mm. large and brownish ochre-yellow bordering, are placed on each wing, those of the hindwing in a curved row. In the ♀ the eye-spots measure 8—9 mm. The under surface is brownish ochre-yellow, everywhere finely striated with brown, with brown median band on both wings, two brown half-bands in the cell of the forewing, a similar half-band before the median band of the hindwing and brown distal margin. In place of the eye-spots the forewing has three white dots and the hindwing two white dots and a black one. There is further a black dot at the base of the hindwing. The scent-organ is only 10 mm. long, is placed 4 mm. from the base and consists of a row of yellow-brown hairs on the submedian, 3 mm. in length, with dark brown tips. It does not quite reach the middle of the inner margin and is consequently concealed by the hindwing even when the fore wing is set very high. Opposite to the scent-organ is placed here also on the upperside of the forewing a pear-shaped patch of flattened scales, which is 7 mm. long and 5 mm. broad, but may easily be overlooked. Moreover, a small, bare, scaleless patch at the costal margin of the hindwing may be mentioned as the so-called friction-patch. — The earlier stages of this species have been observed by Fassl in Colombia: The egg is hemispherical, white, not shiny; the base somewhat incised. Of the same size as that of *Harpyia vinula.* The larva looks almost like that of *Bomb. neustria,* with similar variegated and well-defined markings, but with diverging dorsal lines. The very large head is yellowish green, the body posteriorly narrowed and terminating in a long forked tail. The pupa is somewhat stouter, otherwise similar to a large *Pyram. atalanta*-pupa. Some are green and some brown, the variation being independent of the sex. Food-plant of the larva a species of palm. Colombian West Cordillera, or more exactly: Carmen 1800 m., valley of the Rio Agna, 1800 m., from November to January, St. Antonio, 2000 m., in April in dense, dark, primeval forests at the passes. Huamboya in Ecuador (1200—2200 m.).

geryonides. **A. geryonides** *Weym.* (43 c). Similar to the preceding species, but the ground-colour is dark olive-brown, the distal half of the forewing and the hindwing especially dark. The eye-spots are larger, in the ♂ measuring on the forewing 8—9 mm. in diameter, on the hindwing 5—6 mm. Their pupils are likewise larger (2—2½ mm.) and bluish white. The red-yellow bordering of the ocelli in *geryon* is here entirely absent. The under surface is likewise darker than in *geryon.* The white dots on the forewing are somewhat larger and instead of the black dot between the middle and lower median vein of the hindwing there is a small black ring with white pupil. One of the principal differences is found in the scent-organ. This is much larger than in *geryon,* covering a wedge-shaped, proximally pointed, distally rounded area of 18 mm. in length, its greatest width being 6 mm. Hence even when the wing is not set very high the distal part of the scent-organ lies free and only the proximal ¾ are covered by the hindwing. The hairs are arranged in two longitudinal rows and in the rounded distal part are placed close together, bending towards one another with the tips touching. The patch of appressed scales placed opposite to the scent-organ on the upperside of the forewing is of the same shape as in *geryon* and is distinctly visible. The ♀ attains an expanse of up to 90 mm. The ocelli on the wings are even larger than in the ♂, measuring 10—12 mm. on the forewing, 7—10 mm. on the hindwing. The bluish white pupils reach 2—3 mm. in size. On the hindwing there is, moreover, a 4th smaller ocellus, which occupies a different position in the two ♀♀ before me. In the Ecuador example it is placed between the lower radial and the upper median vein, but in the Colombian example near the costal margin. Moreover, the ground-colour in the latter is darker than in the former, yet both are easily distinguished from *geryon* by the large bluish white pupils. Ecuador (Sarayaku and Makas); Colombia (Rio Toche at the Quindiu, 2200 m, in September, and Cañon del Tolima, 1700 m., in December).

c) Apex of the forewing as if truncate, the distal margin obtusely angled at the upper radial. The inner margin of the forewing in the ♂♂ deviating 4—6 mm. from the rectilinear. Otherwise as in b.

phasiane.

A. phasiane *Btlr.* (43 c). Size about the same as in the preceding species, pattern also similar, but the apex of the forewing is as it were truncate, so that the distal margin forms an obtuse angle below the apex. The inner margin of the forewing in the ♂ deviates 4 mm. from the rectilinear; ground-colour reddish brown. Forewing with 3 large, white-centred ocelli, of which the anterior one has 2 pupils (one near to the edge). Hindwing with 4 round black spots in place of the ocelli. On both wings the ocelli and spots are surrounded by brownish red-yellow. The under surface is almost like that of *geryon*, but the ground-colour is reddish brown, the distal margin is not darker and before it stand out distinctly on each wing 4 white spots, which correspond to the pupils and spots of the upper surface. The sexes do not differ in colouring and markings. Venezuela (Maracaibo); Peru (Chanchamayo).

pterocopha.

A. pterocopha *Godm. & Salv.* The shape of the wings and the scheme of markings on the underside is very similar to that of *phasiane*. But the upper surface is widely different and much more brightly and finely coloured. Moreover, the two sexes differ considerably above in the markings. ♂ 95 mm. in expanse. The inner margin of the forewing is more strongly excurved than in *phasiane*, deviating 6 mm. from the rectilinear. Forewing above dark brown with 3 grey dots in cellules 3, 5 and 6, and with an oval patch of flattened scales close above the submedian, which is widely curved posteriorly. Hindwing with a large, orange-yellow, horse-shoe-shaped spot at the apex, a large blue spot, 20 mm. in length, at the anal angle, which occupies almost the entire distal half of the inner margin as far as the lower median vein, and with 2 smaller blue spots in cellules 2 and 3, of which the latter is a mere dot. The under surface is similar to that of *geryon* and *phasiane*, yellowish brown, finely strigulated with dark brown, with brown, somewhat curved median band on both wings, 2 brown half-bands on the forewing in the cell and a brown basal band on the forewing, which is posteriorly divided into several parts. All these bands are accompanied at the distal side by lilac-coloured stripes, which fade off into the ground-colour. In the marginal area 3 white dots on each wing. ♀ 100 mm. in expanse. The inner margin of the forewing is not straight as in the other species of *Antirrhaea*, but somewhat excurved, yet the curvature only amounts to 3 mm., thus only half that of the ♂. Ground-colour dark brown; forewing behind the middle with a lilac transverse band, which, gradually narrowing, extends from the costal to the inner margin, is interrupted in cellule 4 and on which white dots are placed in cellules 2, 3, 5 and 6. The hindwing has the anterior half of the distal margin red-yellow for a breadth of 11—12 mm. with a brown submarginal stripe. From the upper median vein to the anal angle the red-yellow distal margin is only 4 mm. in breadth. In cellule 3 there is a larger, in cellule 5 a smaller lilac spot, the former on a brown, the latter on a red-yellow ground, both with a white centre. Costa Rica, Panama (Santa Fé, Calobre). Very rare.

d) Apex of the forewing rounded, inner margin of the forewing in the ♂♂ so strongly excurved that it deviates 7 to 10 mm. from the rectilinear. Hindwing at the upper median vein produced into a point, at the lower obtusely angled.

philoctetes.

A. philoctetes *L.* (= morna *F.*) (43 c). Forewing unicolorous brown with a white dot before the apex. The patch of flattened scales does not differ from the ground-colour, is large, oval, 12 mm. long and 7 mm. broad and stands out rather distinctly. Hindwing brown, at the costal margin lighter, distally and posteriorly darker, a blue spot at the anal angle, followed by 2 large oval spots of the same colour, which have a thick black centre, then a blue dot in cellule 4 and two white dots in cellules 5 and 6. On the under surface the forewing is grey-brown with 2 straight brown transverse lines in the cell and a straight white stripe behind the middle, which is only bent on vein 2 and terminates before the scent-organ. On both sides of this stripe the ground-colour is somewhat darker. The scent-organ is circular, the hairs placed at the edge of the circle are directed towards its centre and the tips touch one another. Even when the wings are not set very far forward the anterior part of it remains free. Through the middle of the hindwing runs a dark brown band 15 mm. in breadth from the costal to the inner margin, in the marginal area in cellules 2 and 3 there are two black spots margined with light brown and in each of cellules 4, 5 and 6 a white dot. A brown undulate line before the distal margin. Guiana, Lower Amazon, Tapajos. — *scoparia.* **scoparia** *Btlr.* only differs from *philoctetes* in that the forewing has above a lighter brown ground-colour, the markings of the underside showing through distinctly, and that on the hindwing basally to the blue macular band of *philoctetes* there is a second band consisting of 4 spots. On the underside of the hindwing the 2 dark spots in the marginal area are nearly joined to the brown median band. Described from an example from the Kaden collection, now in coll. Godman, of which the locality is not known.

philaretes. **A. philaretes** *Fldr.* (43 d). The forewing is quite similar on both sides to that of *philoctetes* and the shape of the scent-apparatus is exactly the same, but the hindwing is very different. It has in the ♂ 2 round blue spots of 4 mm. diameter in cellules 2 and 3 and a dot of the same colour in cellule 5, in which is placed a fine white pupil. Sometimes there is a 4th spot between them. In the ♀ this is probably always the case. On the under surface the white band of the forewing is continued fairly straight across the hindwing, extending close to the inner margin near the anal angle. On it is placed in cellule 2 a small round black spot and near it at the distal side in cellule 3 a similar, larger spot surrounded with white. At the base of the hindwing 3 small brown spots. From Bogotá in Colombia and Pebas on the *philopoemen.* Upper Amazon. — **philopoemen** *Fldr.* Larger than *philaretes,* the ♀ attaining 100 mm. in expanse. Ground-colour brown, on the forewing behind the middle a straight white band, before the apex 2 white dots, a brown submarginal line, behind which the margin is reddish. The hindwing in the distal half blackish with violet reflection and 6 oval, glossy blue spots between the lower median and the costal margin, with reddish, sometimes white-spotted crescents at the distal margin. The under surface is similar to that of *philaretes,* but the basal half of the forewing is considerably lighter, the white band is broader on both wings, but on the hindwing is reaches only the submedian, not the inner margin. From Villeta, Cordillera *avernus.* of Bogotá. 1500 m. Rare. — **avernus** *Hpff.* (43 d). Similar to *philopoemen,* but somewhat smaller: ♂ 78—85 mm., ♀ 90 mm. in expanse. The inner margin of the forewing in the ♂ is more strongly curved distally. The deviation from the rectilinear amounts to 10 mm. Forewing in the ♂ unicolorous brown with only one white dot before the apex, in the ♀ in addition behind the middle with a narrow, dull white transverse stripe, interrupted at the veins. The hindwing has in both sexes 3 large, bright blue or violet-blue spots between the submedian and the 3 median veins, which almost entirely fill up the width of the cellules and are 8—11 mm. in length. The largest is nearest to the inner margin. In the ♀ there are further in the anterior half of the wing 2 or 3 small blue spots, in the ♂ only one between the radials, which has a white central dot. The under surface is quite similar to that of *philaretes,* and likewise the scent-organ. This form may be distinguished at once from its allies by the large blue spot between the submedian and the lower median vein on the upperside of the hindwing. Peru (Chanchamayo), Ecuador (Macas and Sarayacu).

miltiades. **A. miltiades** *F.* (= casta *Bates,* lindigi *Fldr.*) (43 d). 80—90 mm. span. Forewing in the ♂ brown with 1 or 2 white dots before the apex. These are somewhat larger in the ♀, which bears moreover a narrow white band running from the costal to the inner margin. Hindwing brown, in the ♂ with an irregular white spot between the median veins, which is posteriorly prolonged into a point. In the ♀ this spot is falcate and there are several small spots before and behind it, and on the distal margin white crescents are placed between the veins. The under surface is quite similar to that of the preceding species, but the white band between the median veins on the hindwing is somewhat widened, so that a white spot is formed here, which is similar to that on the upper surface. In this are placed 2 round black spots, one of which is sometimes a mere dot. At the base three brown dots. The scent-organ as in the preced-*murena.* ing species. From Guatemala, Nicaragua, Costa Rica, Panama, Colombia (Muzo). — **murena** *Stgr.* is a local form of *miltiades,* distinguished by its smaller size (70 mm. expanse) and by having the white spot on the hindwing divided into two parts by the central median vein, so that only the white bordering of the black spot placed beside it remains. Moreover, the white bands of the underside show through somewhat above, the base of the hindwing is light brown above and at its apex there are 2 grey dots. On the under surface the distal part of the basal area is lighter brown, the white band is a trifle broader on the forewing, but the widening of this band between the median veins on the hindwing is almost entirely absent, whilst the black spot at this place is much enlarged. From Massauary on the Rio Maues (Lower *tomasia.* Amazon). — **tomasia** *Btlr.* (43 d). Expanse 80—95 mm., is a form similar to the preceding two, in which the white spot on the hindwing between the median veins is entirely suppressed, but instead there is sometimes a small white dot in cellule 5. The costal margin of the hindwing is light grey, as in all the allied forms, and before the apex of the forewing are placed 2 white dots. On the under surface the white stripe on the forewing is much narrower than in *miltiades,* on the hindwing it is entirely absent as far as the upper median vein. Then follows in cellule 3 a white spot measuring 3 mm., which is almost entirely filled up by a round black spot. Between the central median vein and the inner margin the white stripe is present, but quite narrow and interrupted several times. The median area of the hindwing beneath is darker than the marginal and basal areas. From Panama (Chiriqui, Bugaba, Veragua).

Note. Whether *Antirrhaea bifasciatus Gmelin* cited by Kirby in his Catalogue really belongs to the genus *Antirrhaea* or even to the American fauna, appears questionable, as it cannot be recognized from the description and the locality was not known to the author. The species is only designated as exotic, and hence may just as well belong to the Indian or African fauna. The original of the description was in the Museum Leskeanum, and no further example is known. According to this description the wings are angled, brown above, and the under surface is grey with 2 common brown stripes and a broad grey common band, posteriorly dentate, in which on the forewing on a brown ground are placed 5, on the hindwing 6 ocelli with white pupils and yellow iris. Of the eye-spots on the forewing the middle ones are larger. Habitat extra-European (Gmelin, Syst. Nat.).

5. Genus: **Sinarista** *Weyn.*

The distinguishing characters of this genus are the absence in the male of the tuft of hairs between median and submedian on the under surface of the forewing and the form of the submedian of the same wing, which is only elbowed at the base, otherwise almost rectilinear, and only reaches the distal margin in the rounded inner angle, whilst in *Antirrhaea* it describes a more or less extended curve and runs into the inner margin far before the inner angle. The inner margin of this wing is likewise little curved posteriorly, the distal margin forms a straight line and the apex a right angle. The distal margin of the hindwing is produced into a distally directed point at the upper median vein, at the other veins it is only undulate. The single species of this genus has a very dusky appearance and is quite a recent discovery.

adoptiva.

S. adoptiva *Weym.* (44 a). Expanse 82 mm. The shape of the wings is that of *A. geryon Fldr.*-♂, but the ground-colour even darker brown than in *A. geryonides Weym.*, almost black-brown and uniformly dark all over. On the forewing are placed in cellules 2, 3 and 5 three black eye-spots with white pupils, the upper one measuring 5 mm., the two lower only 3 mm. in diameter; on the hindwing in the same cellules three black spots without pupils, the anterior and posterior spots round, 5 mm. in diameter, the middle one oval and somewhat larger (6 to 8 mm.). These spots stand out but little from the dark ground-colour, sometimes the two posterior ones have fine, scarcely visible, white-grey pupils. The distal margin of both wings is finely bordered with red-brown, the tips of the fringes white. The under surface is dark brown covered with many fine bluish white dots, which mostly consist of single scales and at the costal margin of the forewing are condensed into a few white spots. Distally this dusting disappears, so that the margin appears unicolorous brown. In place of the eye-spots there are on the upper surface of the forewing three ochre-yellow dots, the anterior one somewhat larger, and on the hindwing in place of the middle spot a small bluish white spot. Discovered by Fassl in the Colombian West Cordillera. The ♀ of this species is not yet known.

6. Genus: **Caerois** *Hbn.*

This genus also is distinguished by the possession in the male of a scent-organ at the inner margin of the forewing beneath, moreover on the upperside of the hindwing in the middle of the submedian there is a hair-tuft which consists of a row of brown hairs. The male forelegs are much reduced, the palpi rather long, with thin, curved middle joint, densely scaled anteriorly. The veins are not swollen. In the ♂ only one subcostal vein arises before the end of the cell on the forewing. The hindwing runs out into a tail at the upper median vein, at the submedian it shows an obtuse angle. The other veins do not project on the distal margin. Large butterflies of 80—90 mm. expanse, whose habitat is Central and northern South America.

chorinaeus.

C. chorinaeus *F.* (= arcesilaus *Sulz.*) (44 a). The costal margin of the forewing is strongly curved posteriorly at the apex, the apex itself broadly rounded, the distal margin deeply incised below the apex, the inner angle rounded, the inner margin somewhat projecting. Ground-colour brown with broad red-yellow oblique band, without eye-spots, only with a white dot before the apex. The distal margin of the hindwing has a red-yellow border 2—4 mm. in breadth, the brown point at the upper median vein projects horizontally distad. The brownish ochre-yellow under surface is finely striated with dark brown, with three brown, almost straight and parallel transverse lines on the forewing, of which the middle one only reaches to the median, the hindwing with two lines running in the same direction, which extend from the costal margin to below the middle of the wing, and a third straight line, which connects the apex with the anal angle. The scent-organ of the ♂♂ is placed close to the inner angle on the upper surface of the forewing, so that it is not covered by the hindwing; it is 12 mm. long, 8 mm. on the inner and 4 on the distal margin. The anteriorly directed hairs of this scent-organ are 3 mm. long, and dark brown. In addition there is a small brown hair-tuft on the upperside of the hindwing near the inner margin. — Stoll has figured the larva and pupa of this species in the supplement to Cramer's exotic work, pl. VI, fig. 1 and 1a. The larva has at the posterior end of the body two points of extraordinary length. The body of the larva is 60 mm. long, the points measure 30 mm., thus reaching half the length of the body; they stand straight out posteriorly and are covered with small, fine hairs, whilst the larva itself is naked. The head is proportionately large, red-brown with yellow margins and stripes, the mouth-parts black. The body bears no protuberances, is 5 mm. thick anteriorly and posteriorly and 7—8 mm. in the middle, and very gaily marked. Ground-colour reddish violet, venter and legs yellow; on the dorsum a yellow longitudinal stripe, which is broad in the middle of each segment but narrow in the incisions, so that elongated quadrangles are formed, on which are placed darker yellow and blackish markings and which at each side of the dorsum are bordered by several red-brown and yellow undulate lines. The pupa is suspended, about 22 mm. long, 9 mm. thick, with the abdomen much bent. It shows no sharp-edged protuberances, but only a flat rounded elevation on the middle of the dorsum. Wing-cases and ventral side are unicolorous light brownish grey, the dorsum on the contrary has a yellowish brown colour and is densely covered with many small black transverse streaks and spots. The food-plant of the larva is the sugar-cane. The butterfly appears from the pupa in 11 days. It occurs in Guiana and the whole Amazon region.

gerdrudtus. **C. gerdrudtus** *F.* (= gertrudtus *Godm. & Salv.*, vespertilio *Thieme*) (44 a). The costal margin of the forewing is not bent so far back as in the preceding species and runs out into a rather sharply produced apex, yet the distal margin is only a little incurved. Ground-colour brown with dark violet reflection from the base to beyond the middle of the wing. Before the apex of the forewing a large black eye-spot with white pupil, proximally bordered by a red-yellow crescent, below this a red-yellow spot. In the figured ♀, somewhat nearer to the inner margin, is placed a second smaller eye-spot of the same colour with complete red-yellow ring. This second eye-spot is absent in the ♂. On the hindwing the dark violet reflection is extended nearly to the distal margin. The pattern of the under surface is very similar to that of *chorinaeus.* The brown transverse stripes proximally shade off imperceptibly into the ground-colour, distally they have lighter borders. The scent-organ is not placed at the inner angle as in the preceding species, but much further basally at the inner margin. It begins 8 mm. from the base, has a length of 18—19 mm. and terminates 5 mm. before the inner angle. It consists only of a row of stiff, closely approximated hairs, which are directed anteriorly, 6—7 mm. long, somewhat crimped at the tip and of yellowish brown colour. The submedian is covered by these hairs and terminates at the end of the scent-organ in the inner margin, which is much excurved. Also in this species there is a small, short hair-tuft at the middle of the submedian near the inner margin on the upperside of the hindwing. From Panama (Lion Hill), Costa Rica (Santa Clara Valley), Ecuador (Balzabamba), Colombia. — As BUTLER has compared the figure of this species (which is one of the unpublished figures of JONES, used by FABRICIUS in describing the species) with the example in SALVIN's collection and found them to agree (cf. BUTLER, Catal. of Diurnal Lepid. described by FABRICIUS, p. 9), I have no hesitation in retaining the name *gerdrudtus Fabr.*

7. Genus: **Tisiphone** *Hbn.*

[illegible] the [illegible]

Forewing with rounded apex, the distal margin slightly undulate, on the hindwing more strongly undulate. The lower discocellular on both wings is at least twice as long as the middle and upper discocellulars. The palpi are densely scaled, the antennae with indistinct and weakly thickened club. The claws of the middle and hindlegs are bipartite. Medium-sized and rather large brown butterflies with white macular band on the forewing and a row of eye-spots on the underside of the hindwing. The range of distribution extends from Mexico to South Brazil.

hercyna. **T. hercyna** *Hbn.* (= anosia *Godt.*) (44 b). Brown, darker in the distal half of the wing, with a row of large white spots through the middle and a small spot before the apex of the forewing, as well as some similar spots at the margin of the hindwing. Costal, median and submedian of the forewing are somewhat thickened at the base. On the under surface the ground-colour is somewhat lighter, brownish grey, the white spots as above, the hindwing with several dark brown, strongly dentate lines, behind the middle with a curved row of 6 large, round, white-centred ocelli, of which the 2 anterior ones have black, the 3rd, 4th and 5th grey-brown iris, but the last is doubly pupilled with black. All the ocelli are surrounded by a yellowish grey ring and outside that by a dark brown one. The apex of the forewing is beneath likewise brownish grey with an eye-spot which is coloured like the anterior one on the hindwing. Habitat: South Brazil (province of Santa Catharina, province of Parana, Rio de Janeiro, in certain years in great abundance), Mexico.

maculata. **T. maculata** *Hpff.* (44 b). Similar to the preceding species, but considerably smaller, the ground-colour somewhat lighter, the white spots on the forewing are much smaller above and beneath, are isolated, and form a more outcurved series. On the hindwing they are entirely absent. The under surface of the hindwing is much lighter than in *hercyna,* otherwise with similar markings. Habitat: Mexico, Guatemala, Nicaragua, Costa Rica, Panama, Colombia, Venezuela, Bolivia, South Brazil (Rio Grande do Sul).

Note. *Tisiphone lyssa*, described by BURMEISTER, is = *Pedaliodes* (*Pronophila*) *porina Hew.*

8. Genus: **Enodia** *Hbn.*

Butterflies somewhat below medium size. The costal vein of the forewing is not strongly, but yet visibly, swollen at the base, the upper discocellular is very short, the middle one less than half the length of the lower. In the hindwing the costal vein does not reach the apex. The distal margin on the forewing is weakly undulate and below the middle somewhat incurved, that of the hindwing being more strongly undulate with an obtusely projecting tooth at the upper median. The antennae are light and dark ringed, with dark club, which is not abruptly but still distinctly thickened, and light tip. Palpi long and thin, densely haired anteriorly. Eyes hairy. Forelegs in both sexes much aborted. The genus consists of two North American species, one of which was for a long time regarded as a variety of the other, until Skinner described it as a separate species. The other, the well-known *portlandia,* was referred by Westwood to the genus *Debis* (= Lethe *Hbn.*), by Kirby with ? to the genus *Euptychia.* Dyar in his catalogue introduces Hübner's name *Enodia* for it. The neuration of the butterflies agrees with the Indian genus *Lethe,* but the shape of the larva differs in that the head in *Lethe* bears one horn, in *Enodia* two.

E. portlandia *F.* (= andromacha *Hbn.*) (44 b). Expanse 48—51 mm. The black spots of the upper surface, which are here non-pupilled, with brownish yellow borders, have beneath mostly white pupils and a dark brown second ring as border; also their number is increased by one, a small double eye-spot being present at the anal angle. In the basal area on both wings a somewhat curved brown line, a second strongly dentate brown line through the middle of the wings, a narrow brown submarginal band and two fine brown marginal lines, between which the margin is filled up with ochre-yellow. — The larva is slender, narrowing to a point from the middle to the anus, green, with a red dorsal and a dark green lateral line. The head is bipartite, each part bears a short conical horn; the last abdominal segment with two posteriorly directed points. On grasses. The pupa concave on the dorsum, convex on the ventral side, with an obtuse elevation on the thorax, light green. The butterfly is distributed in the United States from the east coast to the Rocky Mountains and from Maine in the north to the Gulf of Mexico in the south. *portlandia.*

E. creola *Skinner.* Similar to the preceding, but larger, ♂ and ♀ 57 mm. expanse. Forewing in the ♂ more elongated, at the costal margin more convex, at the distal margin more concave. Ground-colour darker grey-brown, the black spots on the forewing not margined with brown-yellow, at both sides of the veins on the forewing are placed long cottony dark brown spots, which are proximally connected, distally pointed. On the hindwing the black spots are all of the same size. In the ♀ the brown-yellow bordering of the black spots is broader than in *portlandia.* Occurs along the Gulf of Florida to Mexico. Rare. As I do not know *creola* in nature, I leave the question undecided whether it is a good species or only a local form of *portlandia.* *creola.*

9. Genus: **Taygetis** *Hbn.*

This genus consists of large and medium-sized butterflies, and also some below medium size. The largest species measure 95—100 mm, the smallest 48—50 mm. The ocelli are naked; the palpi with strong, bristly hairs. Antennae thin with feebly thickened club. The costal and median veins of the forewing are swollen at the base. Two subcostal veins on the forewing arise before the end of the cell and two beyond it. The upper discocellular is rather short, much shorter than the middle discocellular, this and the lower one are of equal length. In the hindwing the upper discocellular is almost as long as the middle, the lower on the contrary mostly somewhat longer. The forewing is either smooth-margined, with the apex either rounded or produced, or the apex appears truncate, an obtuse angle being formed at the upper radial. The hindwing is more or less strongly dentate, in many species the dentition extends over the whole distal margin, in others only on the posterior part. Mostly the most strongly projecting tooth is placed on median 2, but in single species on median 3. With but few exceptions the upper surface is unicolorous brown. The few known larvae live on species of bamboo. The range of distribution extends over the whole of tropical America, northwards to Mexico and southwards to South Brazil.

T. mermeria *Cr.* (44 c). The largest species of the genus and very variable in the shape of the wings and the pattern of the under surface. The name-typical form has the apex of the forewing rectangular, sometimes somewhat rounded. The distal margin of the forewing is smooth, that of the hindwing undulate with blunt angles. Upper surface unicolorous olive-brown. Fringes sometimes olive-brown, sometimes brownish white. The under surface is very variable, mostly it is grey-brown with a narrow, straight, whitish median band through both wings. Beyond this a row of 5—6 dark ocelli on each wing, of which, however, often only the white pupils are visible. Sometimes also the lighter band is wanting, especially on the forewing, or it is only indicated by a lighter shading, before which a broad dark brown median band runs through both wings. The species has a wide distribution and is locally not rare. Mexico, Guatemala, Honduras, Nicaragua, Costa Rica, Ecuador, Peru, Amazons, Bolivia, British Guiana, Surinam, Brazil. The butterfly flies in the lowlands in the shadow of the woods near the ground and is difficult to distinguish from the dry, fallen leaves on which it is fond of resting. — **crameri** (*Stgr. i. l.*) *form. nov.* (44 c) is a form of *mermeria* in which the underside of both wings is for the most part reddish ochre-yellow and some of the eye-spots on the forewing are much larger and likewise ochre-yellow; sometimes they are so on the hindwing also. From Mexico and South Brazil. — **tenebrosus** *Blanch.* (44 c), likewise a form of *mermeria,* in which the forewing is produced at the costal margin into a fine point several millimeters in length and the eye-spots on the under surface of the forewing are mostly only small. The hindwing has beneath before the middle a light brownish *mermeria.* *crameri.* *tenebrosus.*

excavata.

yellow or light brownish grey band of 10 mm in breadth, sprinkled with dark brown dots. This form occurs in Mexico, in Honduras and other countries of Central America, on the Amazon (Ega), in Ecuador, Surinam and South Brazil (Blumenau). — **excavata** *Btlr.* (44 c), a further form of *mermeria*, is distinguished by having the posterior part of the hindwing rather more deeply excised at the distal margin between veins 1 b and 3. The forewing is likewise produced into a long point at the costal margin. From Honduras and Colombia [1]).

armillata. *jimna.*

T. armillata *Btlr.* is intermediate between *mermeria* and *ypthima*. Somewhat smaller than the former. Expanse 90—95 mm. The forewing runs out into a point, which is not so elongated as in *tenebrosus* and *excavata*. The hindwing is produced into sharp teeth at veins 1 b to 4. Upper surface olive-brown, the margin somewhat darker, the ciliae lighter. The principal difference from *mermeria* lies in the position of the median band on the underside of the hindwing. This band is not straight as in *mermeria*, but curved and running parallel with the distal margin. The eye-spots on both wings are much smaller and those of the forewing are placed in a nearly straight row. From Colombia, Ecuador, Bolivia. — **jimna** *Btlr.* (44 d) is a form of *armillata*, which only differs in the lighter colour of the under surface and in the less angled, more prominent transverse band. From Panama, Thauropolis.

larua.

T. larua *Fldr.* (46 a). Somewhat smaller than *armillata* (80—85 mm expanse). Upper surface unicolorous dark olive-brown, the apex of the forewing somewhat produced. The teeth on the hindwing are somewhat less prominent than in *armillata*. The under surface dusted with steely black-grey, especially the hindwing, which is slightly glossy. The transverse bands are very narrow, but quite as much curved as in *armillata*. From Colombia (Bogotá) and Paraguay. The figure is taken from Felder's type in the Tring Museum.

ypthima. *ophelia.* *xantippe.* *semibrunnea.*

T. ypthima *Hbn.* (= chelys *Burm.*) (44 d). Forewing with pointed apex, below this the distal margin somewhat incurved. Hindwing with pointed teeth on veins 1 b to 4. Upper surface olive-brown, with dark brown border about 3 mm in breadth. Cilia yellowish grey. The under surface is very variable, in the typical form brownish yellow, finely marbled with brown, on the forewing with 2 lilac-coloured transverse bands, between and behind which the ground-colour often becomes dark brown. On the hindwing two darker, somewhat curved dentate transverse bands and a row of whitish dots, which are surrounded by brown rings. Of these the one which is placed in cellule 2 often stands out as a distinct white spot. Modifications occur of the most varied kinds. The transverse lines become broader, are united into brown spots, and these again into brown longitudinal stripes. Distributed in South Brazil, province of Rio de Janeiro (Petropolis), province of St. Catharina (Joinville, Blumenau), province of Rio Grande do Sul (Porto Alegre), Paraguay. — **ophelia** *Btlr.* (44 d) is a form of *ypthima* with almost unicolorous, brownish ochre-yellow under surface to the hindwing, with somewhat lighter but indistinct median band and small black dots in yellow rings. From Joinville. — **xantippe** *Btlr.* (44 d) has the under surface of the hindwing almost entirely brown with a large reddish yellow area at the apex and a spot of the same colour in the middle. From Blumenau. — **semibrunnea** *form. nov.* (44 d) is a further form of *ypthima* with yellowish grey, brown-dusted hindwing, which has an abbreviated brown basal band and a brown median band extending from the costal to the inner margin. Moreover, the whole distal margin is broadly dark brown nearly to this band, so that between the two there only remains a narrow stripe of the ground-colour, which is interrupted in places. From Blumenau. — The egg and the first 4 stages of the larva of true *ypthima* were described by Müller. The egg, which is laid by the butterfly on the underside of the bamboo leaves, is globular, divided by low ridges into hexagonal areas. The larva in the first stage is 5—8 mm. long. Head light brown, rugose, with 2 horns divided at the tip and 3 conical elevations at each side, each of which is provided with a stiff, clavate, bristle. The horns are whitish at the base, blackish brown at the tip. The body is much narrower than the head, whitish green, the middle segments somewhat thickened, covered with isolated, short, finely clubbed bristly hairs. The anal tail-fork is short. In the second stage the whole head is covered with bristle-bearing tubercles, anteriorly there are 2 brown parallel curved marks, of which the proximal one disappears in the later moults; moreover, on the body there are a white dorsal line and one, later two white lateral stripes. In the 3rd and 4th stages the lateral points on the head become gradually shorter, whilst the upper points of the horns remain. In the 4th stage the head is pale grey, margined with brown. Between the horns is placed a black-brown spot, which is narrowed posteriorly and passes into the dark grey dorsal stripe. This is alternately narrow and wide, and forms with the anteriorly yellow-green, posteriorly orange-yellow subdorsal stripes and the green and white lateral stripes a very complicated pattern. Müller was not able to observe the larvae (which were fed on bamboo leaves) any further, being obliged to leave the locality. Concerning the full-grown *ypthima*-larva, however, Herr SCHMALZ of Joinville tells me that it is green and has a broad grey-yellow longitudinal stripe on the back, which is bordered with yellow-brown. The head is brown-yellow, with two lateral horn-like processes, which bear fine spines. The anal end is long-forked, the ends of the fork with grey woolly hairs and rolled-up. The larva feeds on Crissimma, a species of bamboo. I have not yet received a description of the pupa; but Herr SCHMALZ remarks with regard to the butterfly that it is almost exclusively met with in dark forests near the ground, also it sometimes comes into houses at night. In December 1887 the butterflies were observed flying at dusk in hundreds from south to north from one wooded district to another, low above the ground. Since then they have only been seen singly.

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[1]) Whether the larva which Stoll figures in the supplement to Cramer, Uitl. Kapellen, pl. 7, fig. 1, really belongs to *mermeria Cr.*, appears to me somewhat questionable, as its shape does not correspond to that of the known Satyrid larvae and also the food-plant of this larva (the orange tree) leads one to suspect a mistake. Otherwise only grasses, bamboo and sugar-cane are known as food-plants for the Satyrid larvae. The larva figured is 42 mm long, 7 mm thick; on the dorsum red-brown with white, zigzag longitudinal stripe and with seven long, red and white, hairy spines; on the sides are placed white hairs, which cover the legs. At the anal end two tufts, which likewise bear red and white hairs. The head is triangular, with black and white hairs; on the frons two white stripes which run up sideways from the white mouth-parts to the frons and are joined into a point above. Food-plant: orange tree. The pupa is hung up perpendicularly, 30 mm long, 12 mm thick, with two short points on the head, green in colour and yields the butterfly in 14 days. Further investigations must decide whether Stoll's figure really represents the larva of *mermeria*.

rectifascia. *stigma.* *latifascia.* *servius.*

T. rectifascia *Weym.* (45 a). The apex of the forewing is not or only very little produced, and the teeth of the hindwing are much more obtuse than in *ypthima*. Upper surface unicolorous brown. The under surface is as variable as in *ypthima*, but it may be at once distinguished from the latter by the straight median band of the hindwing, dusted with whitish yellow or brownish. This band is bordered on the proximal side by a straight, dark brown line or a narrow brown stripe. In the marginal area of each wing 5 small, brown, white-centred eye-spots, of which the posterior one on the hindwing is somewhat larger than the others. The brown spot at the apex is absent in other specimens. South Brazil (Blumenau). — **stigma** *Weym.* is a form of *rectifascia*, in which the straight light band on the underside of the hindwing is dusted with grey, in place of the eye-spot in cellule 5 is placed a white spot 2—3 mm in size and instead of the eye-spot in cellule 6 a white dot. Likewise from Blumenau. — In **latifascia** *Weym.* (45 a) the ochre-yellow band on the hindwing beneath gradually increases in breadth anteriorly, only close to the costal margin it again becomes somewhat narrower, the anterior eye-spot is placed in this band, the 2nd on the boundary between band and marginal area. From the province of St. Catharina (Brazil). — A hitherto undescribed form of *rectifascia* with simple markings I call **servius** (46 c). It is considerably smaller (expanse 53 mm), the teeth at the margin of the hindwing are much less prominent, so that it is similar in form to the smaller *Taygetis*-species *kerea* and *penelea*, but the straight, brownish white median band on the underside of the hindwing, which is 1½ mm in breadth, is placed as in *rectifascia*, and as in the latter is sharply defined proximally, but not distally. Instead of the small ocelli there are white dots on both wings, only the last dot on the hindwing is surrounded by a black ring. For the rest the ground-colour of the under surface is unicolorous grey-brown with very indistinct dark brown marbling at the margins and dark brown marginal double lines. The upper surface is unicolorous dark brown like the type-form. From the province of Minas Geraës (Brazil).

nympha.

T. nympha *Btlr.* Shape as in *ypthima*. The hindwing somewhat less strongly dentate. Upper surface olive-brown, somewhat reddish at the margin, with blackish submarginal line. The under surface resembles *virgilia* in the markings, the second transverse line running almost entirely straight on both wings and only forming a small angle on the hindwing at vein 2. But the submarginal line is much more strongly dentate, there being 2 teeth in each cellule. The ground-colour is mixed with rose-red, paler in the ♀, the border is darker as far as the submarginal line. Before this are placed on a lighter ground on the forewing 4 ocelli, on the hindwing 5. They consist of fine brown rings, measuring 2—4 mm., with dark dots in the middle, some of which have white centres. The third and fourth ocelli on the hindwing are larger than the others. Honduras, Nicaragua, Guatemala.

virgilia. *rufomarginata.* *erubescens.*

T. virgilia *Cr.* (= rebecca *F.*) (45 a). Forewing not projecting at the apex, margin of the hindwing even in the anterior half, undulate in the posterior half, only at vein 4 with an obtuse point. Upper surface unicolorous brown. Under surface brownish grey with 2 straight, parallel, brown transverse lines, a short brown streak on the discocellular of each wing and a fine dentate submarginal line, before which are placed on the forewing 5 white dots and on the hindwing 6. At the distal margin the ground-colour shades off into brown. A widely distributed and common species. Mexico, Guatemala, Nicaragua, Costa Rica, Panama, Colombia, Guiana to South Brazil (Rio de Janeiro and Joinville). — **rufomarginata** *Stgr.* (46 a) is a form which occurs in both sexes amongst true *virgilia* in both north and south. It may be recognized by the reddish brown distal margin, 3—4 mm in breadth, of the posterior half of the hindwing above. In addition the under surface is more reddish brown. The larva of this form was bred by SCHMALZ at Joinville. It is green with yellow longitudinal stripes, with a small rolled-up forked tail. The whole larva with fine hairs. It lives on bamboo. The pupa is green, oval, hanging free. The pupal stage lasted 18 days. The butterfly flies at the beginning of December. — **erubescens** *Btlr.* (46 b), a further form of *virgilia*, is above unicolorous brown, beneath reddish pink, at the inner margin of the forewing olive-brown, the base of the hindwing rust-coloured, with a dark rust-brown median band through both wings, a large oval rust-coloured spot at the end of the cell of the forewing and a similar spot in the cell of the hindwing. From Colombia (Rio Dagua, Bogotá).

chrysogone.

T. chrysogone *Dbl.-Hew.* (45 a) is a large species of 80—90 mm. expanse. The shape of the wings is similar to that of *virgilia*, but the hindwing has sharp angles on veins 1 b to 4, especially the tooth on vein 4 projects more strongly than the others. The whole margin of the hindwing is bordered by a broad, brownish ochre-yellow band, which is proximally strongly dentate and extends from the apex to the inner angle. Under surface light reddish brown with 2 straight parallel brown transverse lines through both wings as in *virgilia*. At the distal side of the 2nd transverse line a whitish nebulous stripe. In the marginal area a row of white dots in indistinct rings and a brown dentate line. From Colombia (Bogotá, Carmen), Venezuela, and Peru. According to Fassl the egg is almost twice as large as that of *Pap. machaon*, white, spherical and completely covered with fine pores like a *Corades*-egg.

acuta. **T. acuta** *spec. nov.* (45 b) approaches *virgilia* in the markings, but the shape is different. The forewing is much longer at the costal margin, the hindwing at the inner margin, whilst the inner margin of the forewing and the costal margin of the hindwing are the same length as in *virgilia*. The distal margin of the forewing is consequently much more oblique. Vein 1 b (the submedian) of the hindwing runs out into a sharply projecting point. The point at vein 4 is even sharper. On the other hand the margin does not project at the other veins, but is only slightly undulate. Upper surface unicolorous brown. Under surface yellowish grey-brown with 2 straight brown lines as in *virgilia*, but the outer line runs more parallel with the distal margin. At the costal margin of the forewing it is 11, at the inner margin 9 mm. from the margin, whilst the distance in *virgilia* amounts to 14 and 7 mm. On the hindwing also this line runs for the most part parallel with the distal margin. From Espirito Santo (Brazil).

celia. **T. celia** *Cr.* (45 a). The distal margin of the forewing forms an obtuse angle on vein 5. The hindwing is dentate not only in the posterior half but also in the anterior, the tooth at vein 4 is stronger than the others. Upper surface unicolorous brown. Under surface yellowish grey-brown, on the hindwing with a somewhat violet tone, with 3 strongly curved brown stripes and the distal margin partly brown. On the third stripe are placed on each wing 5 dark brown eye-spots with white pupils and brown-yellow rings.
keneza. From Surinam, Brazil, Panama (Veragua). — **keneza** *Btlr.* (45 b) is a form of *celia*, which only differs in the less prominent eye-spots and an ochre-yellow spot on the middle of the hindwing beneath. From Nicaragua,
haenschi. Panama, Colombia, Ecuador, Guiana; Brazil (St. Catharina). — **haenschi** *form. nov.* (45 b) is a considerably larger form of *celia*, expanse ♂ 71 mm., ♀ 85 mm. The wings with more strongly produced apex. Above brown, the fringes between the veins whitish. On the underside the median band of the hindwing is almost straight and distally sharply bounded by a dark brown line. The distal margin of both wings is in the ♂ broadly bordered with dark brown, in the ♀ on the other hand the whole under surface is lighter grey-brown and only the boundary-line of the bands dark brown. Hence the dark brown rings of the eye-spots stand out more distinctly in the ♀ than in the ♂. The pupil of the ocellus in cellule 2 of the hindwing is much larger than the others. Collected in Bolivia by Haensch and named in his honour. Colombia (Rio Vitaco).

uncinata. **T. uncinata** *Weym.* (45 b) has the shape and size of *celia Cr.* Above brown with dark brown distal margin about 3 mm broad, white-grey for 1 mm. at the extreme edge, ciliae likewise white-grey. The under surface is characteristically marked in that from the dark brown median band of the forewing, which is 8 mm broad and separates the bluish grey basal half from the yellowish grey marginal area, a pointed tooth projects distally on vein 4, dividing the lighter part of the marginal area into 2 parts. On the hindwing the brown median band is removed further distad, so that it closely approaches the eye-spots. From Mexico. The species seems to be rare.

angulosa. **T. angulosa** *Weym.* (45 b). This is an isolated species as regards shape and markings. The distal margin of the forewing is ventricose in the middle, that of the hindwing forms a rectangular tooth on vein 4, but has no other sharp angles. Expanse 68 mm. Upper surface grey-brown, at $^2/_3$ the length of the wing is placed at the costal margin of the forewing a distally and posteriorly curved yellow-grey stripe, which only reaches to cellule 3. Hindwing with a dark brown submarginal line. Under surface yellowish grey, dotted with brownish, the veins darker. The transverse lines fine, dark brown. The anterior transverse line extends on both wings through the cell to the median. On the hindwing it is continued to the inner margin. The 2nd transverse line forms on the forewing a W, the points of which are placed on veins 3 and 4, on the hindwing it forms a right angle on vein 4. In the marginal area 3 white dots on the forewing and 5 on the hindwing; then follows a thin dentate submarginal line. Brazil (Amazonas, Petropolis). Rare.

andromeda. **T. andromeda** *Cr.* (= laches *F.*, fatua *Hbn.*). Expanse 68—83 mm. The distal margin of the forewing in the ♂ produced into a somewhat obtuse angle at veins 5 and 6, in the ♀ this angle is not present, the margin being uniformly rounded here. Hindwing in ♂ and ♀ uniformly angled at all the veins. Above unicolorous brown, the lighter band of the under surface in the ♀ showing through faintly above. Under surface bluish grey, with a rather broad basal band and a very broad, dark brown median band. The latter is distally straight and sharply defined, and is followed by a straight, whitish grey band extending from the costal margin of the forewing to the hindmargin of the hindwing. Beside this are placed in the marginal area on the forewing 5, on the hindwing 6 yellow-brown ocelli with ochre-yellow and brown rings and white pupils, only the 5th ocellus on each wing is brown or black. From Mexico, Guatemala, Nicaragua, Costa Rica, Panama, Colombia, Venezuela, Peru, Guiana, the Amazon to South Brazil (Rio de Janeiro, São Paulo) and Paraguay.

thamyra. — **thamyra** *Cr.* (45 c) is a form of *andromeda* in which the eye-spot in cellule 2 on each wing is not black but coloured like the others. From Surinam. *marginata.* — **marginata** *Stgr.* differs from true *andromeda* only in having the extreme border of both wings grey for a breadth of about 1 mm in addition to the grey fringes. It occurs in South Brazil (province of São Paulo) and in Paraguay. *leuctra.* — **leuctra** *Btlr.* (45 c) is also referred to *andromeda* by Godman and Salvin. The median area of both wings is broadly dark brown beneath, proximally shading off into lighter, distally sharply bounded by a straight white band. Behind this in the marginal area are placed on a white ground on the forewing 5 small ocelli, on the hindwing 4 somewhat larger ones, of which the 2nd and 5th on the forewing and the 1st and 4th on the hindwing are black, the others brownish, but all have yellow rings and white pupils. Sometimes (as in the example figured) there is in addition a small 5th ocellus on the hindwing. Rare. Butler knew no locality, the example figured is from Terapato in Peru. *uzza.* — **uzza** *Btlr.*, a further form of *andromeda*, in which on the dark brown upper surface of the forewing 2 ochre-yellow bands are placed, one behind the middle, the other before the margin, the latter being proximally margined with brown. On the under surface the basal area is light bluish grey to the middle of both wings, where it gradually shades off into the narrow dark brown median band. The latter is distally not quite straight, but sharply defined. Next to it is placed the white-yellow band of the marginal area, and then follows the almost ochre-yellow marginal area, which is only bluish grey in the inner-marginal half of the hindwing, with 6 eye-spots on each wing, of which only the two last on the hindwing are black with red-yellow rings, all the others being ochre-yellow. Described by Butler from a ♀ from St. Geronimo in Guatemala, coll. Salvin. *elegia.* — **elegia** *Stgr. i. l.* (45 c) is a hitherto undescribed form of *andromeda*, which most nearly approaches *uzza Btlr.* Instead of the two ochre-yellow bands of *uzza*, *elegia* has only one, which extends from the costal margin of the forewing to beyond vein 2 and decreases uniformly in breadth from 11 mm anteriorly to 4 mm posteriorly. The hindwing has sharp angles at all the veins and is unicolorous dark brown with a fine darker submarginal line. The under surface is similar to that of *andromeda*, basal and median area of both wings dark, the proximal part of the marginal area of the forewing is dull ochre-yellow like the upper surface, the 2nd eye-spot is removed somewhat distad as in *andromeda*. The hindwing has behind the middle a light lilac straight band, of the 6 ocelli the fifth is not darker than the others, but of the same colour. ♂ from the Rio Songo (1200 m) and Yungas, Bolivia. Coll. Bang-Haas. *asterie.* — I give the name **asterie** to a new form of *andromeda* in which the marginal area on the underside of the forewing is only a little broader at the costal than at the inner margin, namely 14 mm. against 12. The light band in the proximal part of the marginal area, which is ochre-yellow and 4 mm. in breadth, is consequently much more vertical and is continued in the same direction on the hindwing. The rest of the marginal area is brownish ochre-yellow, on the forewing with five ocelli, on the hindwing with six, of which the first on the forewing and the first and last on the hindwing are only small, the others with the exception of the one in cellule 2 all measure 3 mm. in diameter, but that in cellule 2 has a diameter of 6 mm. and hence immediately attracts attention by its size, moreover it is deep black and has an ochre-yellow and a brown ring and thick white pupil. The other ocelli are all yellow-brown with ochre-yellow and brown rings. The light band of the underside shows through somewhat on the otherwise unicolorous brown upper surface. From Colombia (♀: coll. Weymer). *cleopatra.* — **cleopatra** *Fldr.* (45 c) should probably also be regarded as a form of *andromeda*, although the light under surface and the often very indistinct eye-spots give it the appearance of an independent species. The upperside is brown, the ground-colour of the underside everywhere light lilac. The lightest examples have the transverse bands between basal and central areas and between central and marginal areas only narrow, but the latter transverse band is usually the broader, so that it fills up the distal half of the median area with brown; on the forewing, however, the whole of the median area is often brown, at least in its anterior half. The distal half of the marginal area is likewise brown and shades off proximally on both wings into the lilac ground-colour. Here are placed on the forewing five, on the hindwing six white dots in more or less distinct rings, which latter, however, are often wanting. From Brazil (Rio Negro, Bahia, Espirito Santo). In the examples from Espirito Santo the marginal area of the forewing is much narrower, measuring anteriorly only 10 mm., posteriorly only 8.

xenana. **T. xenana** *Btlr.* (46 b). Distal margin of the forewing straight, but rather oblique, the apex rounded, the hindwing feebly dentate. Upper surface unicolorous dark brown, the apex of the forewing somewhat lighter. On the under surface the base and middle of both wings are dark brown, distally bordered by a straight, light lilac line. Marginal area lighter brown with a row of five white dots on the forewing and six on the hindwing, which are indistinctly margined with ochre-yellow. From Cayenne and from Pebas in Peru. *sosis.* — **sosis** *Hpffr.* (45 d) is quite similar to the preceding in markings, but the forewing is shorter and broader and its distal margin more vertical. Moreover, the hindwing is more strongly dentate. On the underside the marginal area at the costal margin of the forewing is much narrower, and hence its proximal boundary, i. e. the light lilac, distally diffuse line, runs almost parallel with the distal margin, whilst in *xenana* it converges strongly with the distal margin. On the black-brown basal half of the hindwing beneath there is a strongly curved black transverse line. The white dots in the marginal area are very distinct. Peru, Surinam, Brazil (Espirito Santo and Bahia). *godmani.* — **godmani** *Stgr. i. l.* (46 b) is similar to *xenana*, but the forewing is narrower, more elongated and the distal margin incurved in the middle. Upper surface brown. Under surface dark brown to beyond the middle, distally straight-edged; at the base only a little lighter, the basal area of the hindwing bordered by a straight dark transverse stripe, in the marginal area traversed throughout by a lilac transverse band, which on the forewing is anteriorly broad and posteriorly narrow, but on the hindwing on the contrary anteriorly narrow and posteriorly broad, and in which on each wing are placed 5 white dots. Of these dots the one in cellule 2 on the hindwing is surrounded by a broad black ring and a fine ochre-yellow one, which is $2^1/_2$ mm. in diameter. From Chiriqui and from the Amazon.

zippora. **T. zippora** *Btlr.* Shape and size of *godmani.* Above brown, before the apex of the forewing with a large triangular, yellow-grey spot, in the middle of the hindwing a very large, round, black spot, which extends nearly to the costal margin, but not to the distal and inner margins. On the under surface the base of both wings is black-brown, at the inner margin and distally lighter, with two black transverse lines, of which the distal one is bordered with lilac, apex of both wings dusted with lilac, an undulate submarginal line and the distal margin itself black. Forewing with five, hindwing with seven small, brown, white-centred and yellow-ringed ocelli, of which the 5th on the hindwing is larger than the others. Recognizable by the large black spot on the upperside of the hindwing. Cayenne. Rare.

echo. **T. echo** *Cr.* (= betro *Godt.*). Above brown with large, velvety, black-brown spot in the middle and a red-brown diffuse band before the apex of the forewing. Beneath the larger basal half is dark brown, the smaller distal half lighter brown, the boundary of the two colours is formed on the hindwing by a straight line, on the forewing by a somewhat curved one. In the marginal area there are five white dots on the fore-
velutina. wing and six on the hindwing. Surinam, Cayenne, Amazons (Ega). — **velutina** *Stgr.* (46 a) is a form differing but little from *echo*, in which the velvety spot of the forewing is deeper black, but the red-brown band more indistinct. From Puerto Cabello (Venezuela) and Surinam.

banghaasi. **T. banghaasi** *spec. nov.* (45 d). Expanse 55 mm., forewing at the apex rectangular, at the distal margin rounded, somewhat ventricose. Hindwing between the veins only slightly excised. Upper surface unicolorous brown. Under surface in the basal half of both wings grey-brown with an almost straight dark brown transverse line. Before the discocellular in the cell of both wings a diffuse ochre-yellow spot. Distal half of the wings yellow-brown. A lilac-coloured band, 2—3 mm. in breadth, with washed-out margins, runs on both wings from the apex to the inner angle, on the forewing in a proximally directed curve, on the hindwing straight. At the proximal side of this band on each wing five white dots, on the forewing indistinct, on the hindwing distinct, especially the dot in cellule 2. Named in honour of Herr BANG-HAAS of Dresden. From the Rio Songo (1200 m) (Yungas), Bolivia.

puritana. **T. puritana** *Weeks.* As the author says nothing about the relationship to other species and of the shape of the wings, it is possibly not correctly placed here: Expanse 3 inches = 76 mm. Upper surface dark brown with white marginal line. Under surface much lighter brown with a broad dark band through the middle of both wings. A dark brown line crosses the middle of the cell of the forewing and extends to the inner margin. At the end of the cell a fine brown bar. Then follows the dark brown band, shading off lighter proximally, which extends from the costa to the submedian and is sharply defined distally by a dark brown line. In the light brown marginal area a dark brown, zigzag submarginal line and a row of six white dots, which are margined with brown, at the distal margin a white line. On the hindwing the dark band stands out more strongly. Its proximal margin is bounded by a dark line, which begins at the costa 8 mm. from the base and extends to the middle of the inner margin. The line which forms the distal margin of the band extends from the middle of the costal margin across the end of the cell to the inner margin, which it reaches 8 mm before the anal angle. The marginal area is as on the forewing, but only five white dots are present, which, however, stand out more distinctly. Bolivia (Coroico).

salvini. **T. salvini** *Stgr.* (45 d). Above unicolorous brown, the hindwing in this and the two following species shortly but uniformly angled on veins 1 b to 4. Under surface reddish grey-brown, the first transverse line on both wings a little curved distad, dark brown, the distal half of the median area broadly filled up with dark brown and straight-edged, the marginal area broader anteriorly than posteriorly, its proximal half lilac. Each wing with five ocelli, the last on the hindwing filled in with black, the others yellow-brown, all with white pupils. Colombia, Panama (Chiriqui).

tripunctata. **T. tripunctata** *Weym.* (45 d). Above brown with three white spots in a straight row one below another on the forewing, the light band of the underside shows through somewhat above on the hindwing. Under surface lighter brown with narrow, almost straight, distally diffuse white band scarcely 1 mm. in breadth across both wings, and five white, brownish-margined spots on each wing, as well as a finely dentate submarginal line. The marginal area of the forewing is equally broad anteriorly and posteriorly. From Puerto Bertoni and Nuova Germania (Paraguay).

sylvia. **T. sylvia** *Bates* (= nymphosa *Btlr.*) (45 d) is referred by GODMAN and SALVIN in the Biologia to *an-*

dromeda, but it is remarked at the same time that it is the most aberrant form, differing not only in the markings but also in the shape. On account of the white band on the under surface, which on the forewing runs parallel with the distal margin, in consequence of which the marginal area is equally broad anteriorly and posteriorly (in *andromeda* this is not the case), I regard *sylvia* as a good species and place it between *tripunctata* and *blanda*. The upper surface is unicolorous brown. On the under surface basal and median areas are uniform light brown, only the distal part of the median area somewhat darker. The first transverse line is dark brown, not quite straight. The straight white band which follows is narrow on the forewing, on the hindwing it gradually attains the width of 3 mm. In the light brown marginal area are placed on the forewing five, on the hindwing six small eye-spots, of which the 2nd and 5th on the hindwing have black rings and the others brownish ones, but all have white pupils. From Panama, Upper Amazon and Bolivia. — **blanda** *Möschl.* (45 d) is *blanda.* similar to the preceding, but the inner angle of the hindwing more rounded. Upper surface unicolorous brown. On the under surface the white band is broader and on the hindwing somewhat curved. The ocelli somewhat larger, the posterior one on the forewing indistinct, on the hindwing entirely absent. The 2nd and 5th on the latter wing surrounded with thick black, then ochre-yellow and brown rings, the others ringed with grey and brownish. From Surinam and Peru (Cuzco).

T. albinotata *Btlr.* (46 b). A beautiful species. Forewing with the margin entire, hindwing with round- *albinotata.* ed projections on the veins. Upper surface brown, the forewing either unicolorous or with six small, pale brown, indistinct spots before the margin. Hindwing somewhat darker at the margin, before this four round white spots in a straight row and a 5th dot at the inner angle. The fringes white between the teeth. Under surface lighter brown with three whitish yellow transverse stripes on each wing, between the 2nd and 3rd of these stripes on the forewing before the apex 1—3 small ocelli, on the hindwing six large ocelli, the middle ones reddish grey, the others black, all yellow-ringed and with white pupils. From Bolivia, South Peru and Ecuador. Rare.

T. penelea *Cr.* (45 e). Above brown with a broad, somewhat lighter submarginal band on the fore- *penelea.* wing, in which are placed 3—4 dark brown spots. On the under surface a light yellow longitudinal band traverses the middle of the hindwing from the base to the distal margin. In the broad, light reddish grey submarginal band are placed on the forewing 2—5, on the hindwing 4—5 dark eye-spots, some large and some small, which have yellow rings and white pupils. Widely distributed and common. Panama, Venezuela, Colombia, Surinam, Cayenne, Amazon region to South Brazil (province of St. Catharina). — **penelina** *Stgr.* is a *penelina.* form of *penelea* in which the light yellow band of the underside is absent, being covered over by the grey ground-colour. Moreover, at the costal margin of the hindwing there are 2 large black-brown spots, which entirely or partially cover the anterior ocelli of the type-form. In the eye-spots which are still present the pupils have mostly disappeared. From St. Catharina.

T. valentina *Cr.* (= Debis marpessa *Hew.*) (45 e). Above dark brown; beneath lighter brown with *valentina.* three very dentate, thin dark brown transverse lines, the space between the second and third proximally light violet-grey, distally filled up with white-grey and with 5 ocelli on each wing, of which the two anterior ones and the last on the hindwing are darker than the rest. Beside the first and second transverse lines there are small ochre-yellow spots in the cell of the hindwing. Guatemala, Nicaragua, Guiana, Amazons. — **euptychidia** *euptychidia.* *Btlr.* (45 e) is a form of *valentina* in which the ground-colour of the underside is much lighter, the dentate brown transverse lines are very faint and of the eye-spots only 1 or 2 on the forewing and 2 or 3 on the hindwing are distinct, the others indistinct or replaced by white dots with somewhat darker margins. From Brazil (Pará, Espirito Santo). — **zimri** *Btlr.*, referred by GODMAN and SALVIN to *valentina*, is a somewhat larger *zimri.* form, which differs from *valentina* in that the forewing has an obtusely projecting angle on the distal margin below the apex, the eye-spots of the forewing are not some dark and some light, but all uniformly yellow-brown and hence stand out but little from the violet-brownish ground-colour, and there are 6 eye-spots on each wing. For the rest the transverse lines are quite as dentate as in *valentina*. From Chuacus in Guatemala. — **vrazi** *Kheil*, a further form of *valentina*, in which the distal margin of the forewing is very feebly dentate, *vrazi.* that of the hindwing more strongly so, the eye-spots of the hindwing are larger and more sharply marked, the ochre-yellow spot at the first transvers line is absent, but this varies also in *valentina*. Rio Atabapo (Venezuela) and Rio Negro (Brazil).

T. kerea *Btlr.* (45 e). One of the smallest species (48—50 mm. expanse). The distal margin of the fore- *kerea.* wing rounded, the hindwing feebly dentate. Above brown with 2 dark lines at the distal margin and a whitish line between them; the latter stands out most distinctly in the angles of the hindwing. In addition a thin brown submarginal line. Beneath yellowish brown with 3 fine dark brown transverse lines; the first on the forewing indistinct, on the hindwing dentate, the second on the forewing almost straight, on the hindwing running parallel with the distal margin in one long curve, the third as a submarginal line forming short, small curves. In addition 2 fine brown marginal lines with a lighter line between them. Behind the second transverse line 5 white, dark-margined dots on the hindwing and 3—5 more or less indistinct smaller dots on the forewing. Guatemala, Brazil (Espirito Santo), Paraguay.

inornata. **T. inornata** *Fldr.* (46 c). Above brown with 2 darker lines at the distal margin. Under surface lighter with 2 brown lines through the middle of both wings, which on the forewing diverge towards the costal margin, the proximal one forming a curve in the cell, the distal one almost straight; on the hindwing the proximal line is almost straight, while the distal one is curved outwards at the costal margin and forms 2 shallow curves in the middle. At the distal margin 3 brown lines, of which on the forewing the proximal one is undulate and the distal two straight, but on the hindwing all three are undulate. Three white dots on the forewing before the apex, the two lower ones very small, five white dots on the hindwing in cellules 2—6. Colombia (Bogotá).

10. Genus: **Amphidecta** *Btlr.*

Forewing at the distal margin with an obtuse angle below the apex, costal and median much inflated at the base, hindwing with the costal margin fairly straight, the inner margin much longer than the costal, distinctly emarginate, the distal margin dentate, the precostal vein distinctly forked, otherwise the neuration as in *Taygetis*; antennae thin, with scarcely appreciably thickened clubs. Eyes naked; the palpi projecting beyond the head, flattened at the sides, the hairs forming a sharp crest beneath. The genotype is *pignerator*. The two species united with it here differ somewhat in the shape of the forewing, the obtuse angle at the distal margin not being present, but the elongated inner margin of the hindwing and the scheme of markings of the forewing point to a relationship with *pignerator*. The butterflies are of less than medium size, and have been taken at isolated places in Central and South America, but as yet are little distributed in collections.

pignerator. **A. pignerator** *Btlr.* (46 c). Expanse 62 mm. Above grey-brown, on the forewing with 3 round white spots, which are placed in a triangle, one between median veins 1 and 2 and two between median 3 and the lower radial. The hindwing without markings; the marginal line on both wings dark brown, the fringes between the veins whitish. Forewing beneath light grey, the distal part from the apex to nearly the middle of the costal margin and to the inner angle, and also the costal margin itself to the subcostal are finely sprinkled with dark brown, in which colour in addition to the 3 white spots of the upper surface there is a fourth narrow white one and beside it a dark brown spot. Hindwing beneath lilac, sprinkled with violet all over, with 3 dentate transverse bands composed of brown dots, one before, the second behind the middle, the third before the distal margin. Before the latter a row of black dots in light rings. The species appears, however, to be very variable in the colour and markings of the hindwing beneath, as recent consignments from Herr Fassl prove. An example captured at Villavicencio has the underside of the hindwing light brownish grey with a brown distal margin 3—4 mm broad and not sharply defined. The under surface is sparsely adorned with small, fine brown striae, but in such a way that no dark transverse bands are formed, the striation being uniformly distributed all over. The transverse row of fine black dots just before the brown distal margin is, however, distinctly present. The species is but little represented in collections as yet. Bates found it many years ago at Ega on the Amazon in the dense primeval forests, Fassl quite recently at Villavicencio in East Colombia
simplicia. (450 m.) in April. — I give the name **simplicia** *form. nov.* (46 c) to a form of *pignerator* which is dark earth-brown above and has 4 white spots in the apical part of the forewing, which is black with a very dull blue reflection. From Minas Geraës (Brazil).

reinoldsi. **A. reinoldsi** *spec. nov.* (46 c). Expanse 48—50 mm. Above olive-brown, distal half of the forewing dark brown with 8 white spots, which are placed in two rows proximally curved in the middle. At the distal margin of the hindwing a double dark brown undulate line. Under surface grey-brown, the 8 white spots as above and placed in a brown area, which is surrounded by the ground-colour at the costal and distal margins. The hindwing has somewhat before the middle a straight dull white band, then a curved row of round ochre-yellow spots, each of these with a black dot or short streak in the middle. Before the margin a dark brown dentate line, which bears a black dot in the middle of each cellule, and two undulate lines close to the distal margin. The ♀ has a somewhat lighter, more yellowish ground-colour. On the underside of the hindwing the yellow spots are so widened that a continuous band is formed, in which besides the black dots and striae some shiny silver scales are strewed. Minas Geraës, St. Catharina (Brazil). Rare.

calliomma. **A. calliomma** *Fldr.* (46 b). 62 mm. Upper surface olive-brown, the distal third of the forewing darker, with two distally curved rows of 5 brownish white spots each, of which the anterior ones are somewhat indistinct. Hindwing with a submarginal row of brown spots. On the underside the forewing is as above, only somewhat lighter. The hindwing is marbled with dark brown on a grey-brown ground, with 2 silver spots, one near the base, the other in the middle. Behind the latter 3 dark brown eye-spots in ochre-yellow rings, with shining silvery pupils, of which the posterior one is the most distinct. From Colombia (Cordillera of Bogotá, Villavicencio, 750 m., May), Amazon (Manáos). Rare.

11. Genus: **Euptychia** *Hbn.*

This extensive genus with its numerous forms is by no means exactly defined as to its limits, as certain species form a complete transition to the genus *Taygetis*. In general all the butterflies are small to medium sized, only a few species reach a wing-expanse of nearly 6 cm., most remaining below 4 cm. The principal characters of the genus are the hairy eyes, the strongly inflated costal and median at the base, and the somewhat inflated submedian of the forewing. The short, distally curved precostal of the hindwing mostly arises before the subcostal. The upper discocellular of the hindwing varies in length. The forelegs of the ♂ are weak and long-haired. The wings are mostly rounded, the forewing has the apex rounded and little produced, its distal margin is almost straight, that of the hindwing is mostly undulate, sometimes completely round, in other species more strongly dentate, the inner margin of this wing is sometimes somewhat emarginate. But general distinctive characters are furnished by the stripes and the row of eye-spots on the underside of both wings. Only a few species have dots instead of the eye-spots. In the greater part of the Euptychias the colouring is brown or grey-brown. There are, however, also many which are distinguished by a brilliant light blue colouring and which when flying might be taken for Lycaenids. Others have a bright blue reflection on both wings or a part of them, others again have the ground-colour white. Of the eye-spots the one between medians 1 and 2 on the hindwing is mostly present and also usually larger than the other ocelli. Next to it the eye-spot between the two radials of the hindwing is the most developed. If one or several eye-spots are present on the forewing, one of them is likewise placed between the two radials.

The greater number of the species occur in tropical South America. Single species extend southwards to South Brazil and Argentina; from Chile, however, no species is yet known. To the north the genus reaches the limit of its range in the United States. The American authors place the 7 species occurring there in the genera *Neonympha Hbn.* and *Cissia Dbl.* But as these species have exactly similar allies in Mexico and in tropical Central and South America, I follow Butler and Godman and Salvin in referring them all to *Euptychia*. As concerns the vertical distribution of the Euptychias, Prof. Bürger in his „Reisen eines Naturforschers im tropischen Südamerika" („Travels of a Naturalist in Tropical South America") states that they only occur in the „Tierra caliente" and „Tierra templada", the hot and moderate zones, thus up to 2000 m. The great majority of the species will be confined to these regions, but some few ascend somewhat higher and reach the middle of the „Tierra fria", the cold zone, as Fassl has observed the species *necys Godt.* and *harmonia Btlr.* at the Quindiu Pass in Colombia at altitudes of 2500 m.

The habits of the Euptychias (according to Dr. Seitz *in litt.*) are not altogether uniform. The members of the *hesione* group are tireless, although by no means swift fliers; their ♂♂ may be seen at almost all hours of the day flying straight along the edges of woods or bamboo hedges, more resembling a *Pieris* than a Satyrid. Even where they are common, as e. g. in Bahia, where they even come into the town, they are mostly met with singly; and Dr. Seitz, who observed them there day after day, never saw them in large companies like the species of the *hermes* group. The latter are mostly dark-coloured species, show a decided preference for shade and come fluttering out from the thickets especially in the early morning hours, before the sun finds its way into the deep-cut mountain-valleys, flying low, after the manner of *Coenonympha hero*, and settling in large groups at the dew on the roads. Between 8 and 10 o'clock whole swarms of small *Euptychia* may be met with in the Botanical Gardens of Rio de Janeiro, where they rest on shady paths round the water and can scarcely be driven away, as when disturbed they only fly round and round a few times close to the ground, settling again in the same place after a few seconds. The larger forms of the *celmis* group are more retiring, carefully avoiding open paths and clearings, which they cross but rarely and with evident uneasiness; but they resemble the *hermes*-like forms in their habit of closing the wings spasmodically when resting, much as the European *Aphantopus*, from which in the same locality they can only with difficulty be certainly distinguished when flying. The larger species, of which some are also obviously nearly allied to *Taygetis*, show themselves more commonly in open places, the lilac gloss of their upper surface glittering in the sun, which the darker species carefully avoid. Finally the sky-blue species of the *cephus* group are especially lively in bright weather and contribute, together with other insects, to the wealth of bright blue colour which is a feature of the larger forest-clearings of tropical America, competing with *Thecla*, *Morpho*, *Pythonides*, glossy blue dragon-flies, Hymenoptera, bugs and beetles in the brilliancy of their blue and metallic scaling.

Concerning the earlier stages of the Euptychias little is known. Of some North American species Edwards has furnished descriptions and figures of the eggs, larvae and pupae; on the other hand Müller, who obtained eggs and small larvae of some Brazilian species, was not able to bring any as far as the first moult. They live on grasses.

It is not within the scope of this work to give a monographic working out of the genus; we only offer a survey of those already known, and in this we chiefly follow the work of Butler with some few modifications. The types of Felder's species, which Butler was not able to make out, we here figure above and beneath, but must merely refer at the end to some species described and not figured by other authors, as in these cases similar or allied species are not mentioned.

Hesione Group.

hesione. **E. hesione** *Sulz.* (= ocirrhoe *F.*, cissia *Cr.*) (46 d). Above white with broad black apex to the forewing, which is more or less continued on the distal margin. In the ♀ the margin of the hindwing is also black and the forewing has a dark median band. On the under surface brown and white transverse stripes alternate, before the distal margin are placed on the forewing 3, on the hindwing 5 ocelli. The extent of the black colour on the upper surface varies very much according to the locality. Widely distributed and common. Mexico, Central America, Surinam, Colombia, Peru, Bolivia, Brazil as far as St. Catharina. The examples from Bolivia have the forewing somewhat more pointed, otherwise I see no difference. *subobscura.* **subobscura** *form. nov.* (46 d) is an aberrant form, in which the white bands of the under surface, except the distal one, are covered by a brownish grey colour. I have received this from Paraguay, but it also occurs at single localities in Brazil. — *lydia.* **lydia** *Cr.* is a somewhat larger form (60 mm.) with broad, rounded wings. Forewing almost entirely brown, only the basal half of the inner margin is dusted with white, but indistinctly defined. The hindwing is white with 3 fine brown marginal lines and 2 round black spots in cellules 2 and 5. On the under surface the brown bands are much narrower in the basal area, the white bands on the other hand twice as broad. Forewing with 2, hindwing with 5 eye-spots, similar to those of the type-form. Surinam. — *calpurnia.* **calpurnia** *Fldr.* (46 d) is a form similar to *lydia*, but somewhat smaller (50 mm.), with somewhat narrower and more elongate forewing, which has a very shallow excision at the distal margin. The brown ground-colour is somewhat lighter than in *lydia*, the white extends on the forewing from the inner margin to the median, the brown stripes of the under surface show through above on both wings, and also the eye-spots, of which, however, only one is present on the forewing and only 3 on the hindwing. From the Maroni in Cayenne, Surinam. — *binocula.* **binocula** *Btlr.* (46 d), a further form of *hesione*, has the upper surface of both wings light grey-brown with 2 dark brown bands through the middle and broad brown distal margin, which occupies over a third of the wings, only the middle of the hindwing is dull white and in cellule 2 there is a round black, white-bordered spot. The under surface is as in *hesione*. From Cayenne.

metaleuca. **E. metaleuca** *Bdv.* (= butleri *Dist.*) (46 d) is indeed nearly allied to *hesione Sulz.*, but following the example of Godman and Salvin I regard it as a good, independent species. Whilst in *hesione* and its allies the light bands on the under surface are all nearly equal in breadth, in this species the distal band is more than twice as broad as the others, moreover these narrower, basal bands are mostly strongly dusted with grey-brown. In addition the forewing of the ♂ is not so round, but more triangular and at the distal margin somewhat waved. The upper surface of the forewing is black-brown, with a white triangle on the middle of the inner margin. From Mexico, Brit. Honduras, Guatemala, Nicaragua, Costa Rica, Panama, Colombia, Ecuador. — *languida.* **languida** *Btlr.* (46 e) is a form of *metaleuca*, in which the white colour is reduced on the forewing but somewhat extended on the hindwing, and in the middle of the distal margin reaches nearly to the border. In cellule 2 and in cellule 5 a black, eye-shaped spot is placed on the dark border. The under surface is grey-brown with broad white median band, an eye-spot on the forewing in cellule 5, 3 eye-spots on the hindwing in cellules 2, 5 and 6, all black with yellow rings and white pupils. Between the eye-spots of the hindwing and below the eye-spot of the forewing are placed some small round silvery spots. Columbia, Bolivia.

hemileuca. **E. hemileuca** *Stgr.*, only known in the ♀, has an expanse of 38 mm. and somewhat resembles *languida Btlr.* above; but the white colour is extended nearly to the costal margin of the forewing and covers the entire hindwing, leaving only a narrow black distal margin, and the two round black spots are isolated. The under surface is entirely brown-grey with 2 narrow dark brown transverse stripes through the middle, bordered with light grey, 3 fine brown marginal lines, 1 eye-spot on the forewing and 3 on the hindwing. The anterior eye-spot on the latter is 4 mm. in diameter, with black centre and white double pupil. The others are smaller, but similarly coloured. From the Rio San Juan in West Colombia. Rare.

aurigera. **E. aurigera** *Stgr. i. l.* (46 e) resembles no other *Euptychia*; ground-colour white; on the forewing the costal margin, apex and distal margin broadly black-brown, broadest before the apex, hindwing with narrow, dentate brown border. The pattern of the under surface shows through above. This brown with a white band through the middle of both wings, extending from the lower radial of the forewing to the inner margin of the hindwing and pointed at both ends. On the hindwing are placed on a reddish ochre-yellow ground 5 ocelli in a zigzag row and between the 3 brown marginal lines small white double dots on the veins. From Cuzco in Peru, coll. Bang-Haas. Rare.

Mollina Group.

mollina. **E. mollina** *Hbn.* (46 e). Above with the forewing whitish grey, at the costal and distal margin darker with 3 brownish transverse stripes, before the apex a dark spot. Hindwing white with 2 round dark spots in brown rings. On the under surface the ground-colour is purer white, the transverse stripes consequently more distinct. On the forewing a black eye-spot before the apex, surrounded by a brown ring, 3 indistinct eye-spots below it in cellules 2—4. Hindwing beneath with 6 eye-spots, those in cellules 2 and 5 large, in cellules 1 b and 6 small, all black with white pupils and brown rings, those in cellules 3 and 4 obsolescent. From the Amazon region (Pará, Ega), Nicaragua, Mexico. *mollis.* **mollis** *Stgr.* is only a form of *mollina*, in which the forewing has only one or two ocelli on the under surface and also those of the hindwing are reduced in number and some of them much smaller. From Chiriqui. — *hilara.* **hilara** *Fldr.* (46 e). One of the larger forms of *mollina*, above light brownish grey with one transverse stripe on the forewing and 2 on the hindwing, which are somewhat darker, with one eye-spot on the forewing and 2 on the hindwing. On the under surface the ground-colour is still lighter, somewhat whitish, the transverse stripes as above, in the median area of the forewing a reddish yellow washed-out spot and before the apex an eye-spot. On the hindwing 4 small ocelli and 1 large one. Colombia (Bogotá). — *westwoodii.* **westwoodii** *Btlr.* (46 e), a further form of *mollina*, mostly smaller (26—33 mm.) and with the ground-colour purer white. Only the costal and distal margins of the forewing are brownish grey. The brownish bands are narrow and the eye-spots indistinct. On the under surface the forewing has only 3, the hindwing all the 6 ocelli. Mexico, Guatemala, Honduras, Nicaragua, Costa Rica, Panama, Venezuela, Colombia, Bolivia. — *jesia.* **jesia** *Btlr.* (46 e) only differs from *westwoodii* in having the brown transverse stripes on the upper surface entirely absent or only faintly showing through from beneath, the apex of the forewing only 4 mm. in breadth and the costal and distal margins only quite narrowly brown. The under surface is as in *westwoodii*. Bolivia, Ecuador.

meta. **E. meta** *spec. nov.* (46 e). Above grey-brown, on each wing a large white area, which on the forewing is placed nearer to the inner, on the hindwing to the costal margin. The first two transverse stripes converge anteriorly on the forewing, posteriorly on the hindwing. On the forewing a dark spot before the apex, on the hindwing three in place of the ocelli, behind them the dark submarginal band. On the under surface there is in addition a fourth band near the base of the wings and on the forewing are placed 2 ocelli near the apex and on the hindwing 3 in cellules 2, 3 and 5, all black with white pupils and surrounded by 4 rings, namely ochre-yellow, brown, white and outside again brown. The 2nd eye-spot of the forewing and the middle one of the hindwing are smaller, the others are larger, being 3 mm. in diameter and extending over two cellules, so that their outer rings touch one another. In the ♀ an additional small eye-spot is present on each wing, which is placed between the others. From Marcapata (Peru).

fetna. **E. fetna** *Btlr.* Above pale brown, forewing with 2 curved rust-coloured stripes before and in the middle, an obscure rust-coloured spot between medians 1 and 2, before the apex a round black spot in an ochre-yellow ring. Hindwing with rust-coloured median and submarginal stripes and a black eye-spot with white pupil and yellow ring. Beneath lighter, especially in the distal part of the forewing, with a chain of small brown rings before the distal margin of both wings. Forewing with a proximally curved median and a straight rust-coloured basal stripe, which are both continued fairly straight on the hindwing. The latter has 5 eye-spots, of which the 2nd and 5th are black, with yellow iris and brown ring, the others are dull red-brown, all have shining white pupils. On the forewing only one eye-spot as above, with some brownish spots below it. 36 mm. From San Geronimo and Cubilquitz in Guatemala, Amula and Chilpancingo in Mexico. Rare.

enyo. **E. enyo** *Btlr.* Above pale brown with 2 brown median stripes and a submarginal one, a marginal line, a spot before the apex of the forewing and another at the anal angle of the hindwing. The apex of the hindwing is reddish. Beneath ochre-yellow with red-brown bands as in *mollina*. Forewing with 4, hindwing with 6 ocelli. The first on the forewing and the 2nd and 5th on the hindwing are larger than the others. The 6th eye-spot on the hindwing is placed close to the distal margin and the border of cellule 1c near a red-brown longitudinal stripe characteristic of this species, which extends inwards along the first median. 35 mm. From Cuenza (Ecuador). Rare.

anacleta. **E. anacleta** *Btlr.* Pale brown, 2 dark bands through the middle, a blind eye-spot before the apex of the forewing and 5 on the hindwing, the 5th being larger than the others. The submarginal line on the hindwing double. Beneath very light grey, almost white, with 2 red-brown bands in the basal half, a third, broader band, which is only red-brown on the hindwing, but ochre-yellow on the forewing, then 2 undulate blackish submarginal lines, which at the anal angle of the hindwing terminate in 2 orange-coloured streaks. Forewing with a large subapical eye-spot with blue pupil and red-yellow ring, below it 2 indistinct eye-spots and a large washed-out ochre-yellow spot. Hindwing with 5 ocelli, the 1st, 2nd and 5th black with blue pupils, the 3rd and 4th brown with silvery pupils, all with yellow iris. These ocelli, of which the 4 anterior ones are small but the 5th large, are placed in a straight row. 33 mm. Nicaragua (Chontales), Panama (Chiriqui), Colombia (Bogotá). Rare.

insolata. **E. insolata** *Btlr.* (= macrophthalma *Stgr.*). Smoke-brown, slightly transparent, in the disc lighter, sometimes white, 2 almost parallel brown median lines and 2 indistinct submarginal lines across both wings. Forewing with an indistinct eye-spot before the apex, hindwing with 2 black, white-dotted eye-spots, one at the apex, and a larger one at the inner angle. Beneath whitish with the bands as above, the two in the middle and one at the base red-brown, and with black submarginal line. Forewing with 2 eye-spots, one before the apex, black, white-pupilled with red ring, the other indistinct, between the median veins. Hindwing with 3 eye-spots, the two anterior ones margined with red, the third very large, with brown border, at the anal angle. From Nicaragua, Costa Rica and Panama.

picea. **E. picea** *Btlr.* (46 e). Similar to the preceding species, but the wings are not transparent, above brown with 4 dark brown bands, a short one at the base, the 2nd approaching the 3rd at the costal margin of the forewing, the 3rd approaching the 4th at the inner margin of the same wing. A black spot at the apex, the hindwing with 2 in cellules 2 and 5. In the ♀ the wings are more rounded and instead of the spots there are rather large ocelli with ochre-yellow rings and white pupils. Under surface light violet-grey, transverse bands more distinct than above. On the forewing are placed 2 or 3 eye-spots, of which the first is the largest, and the middle one is mostly absent. On the hindwing are placed usually 3 eye-spots, occasionally 4 or 5. Of these the one in the cell is the largest, being 3 mm. in diameter, but sometimes reaching a diameter of 4 to 4½ mm. and then naturally extending far into the adjoining cellules. Two ocelli are placed at the apex in cellules 5 and 6, of which the one in cellule 5 is about the same size as the anterior eye-spot of the forewing, the other being smaller. When additional eye-spots are present, they are placed in cellules 3 and 4, but are even smaller. From the Amazons *rufocincta.* (Ega, Tapajos), and also from Peru and Surinam. — **rufocincta** *form. nov.* (46 f) is a form of *picea*, somewhat larger, the markings quite similar, but the two round black-brown spots on the upperside of the hindwing are first surrounded by an ochre-yellow, narrow ring and then by a red-brown, broad one, forming eye-spots of 4 mm. in diameter. On the under surface there are on the forewing 2 ocelli (the first large), on the hindwing 5 (the 2nd and 3rd larger), some of which are contiguous. From Surinam.

Saturnus Group.

francisca. **E. francisca** *Btlr.* Above violet-brown, an indistinct brown spot at the anal angle and 2 brown marginal lines. Beneath ochre-yellow, two brown, somewhat proximally curved median lines, a submarginal and 2 marginal lines. On the forewing a small eye-spot with pupil, the hindwing with 5 eye-spots, the 2nd and 5th black, with white pupils, 3 mm. in diameter, the others small, the first likewise black, the 3rd and 4th brown, all with ochre-yellow iris and brown ring. Ecuador.

saturnus. **E. saturnus** *Btlr.* (= laccine *Fldr.*) (46 f). Above olive-brown, with a lighter nebulous band through the middle of both wings and a black, white-pupilled and brownish-yellow-bordered eye-spot at the anal angle of the hindwing. Beneath light grey with 2 straight, brown transverse lines and a white band, increasing in breadth posteriorly, through the middle of both wings. Forewing with a black ocellus, the hindwing with 5 ocelli, of which the 3rd and 4th are brown, the others black, all with yellow iris and brown ring, the first 4 on the hindwing with double white pupil, the others with single. At the margin 3 brown lines. Venezuela, Colombia (Rio Agnatal 1800 m., in November), Bolivia (Corvico), Brazil.

vesta. **E. vesta** *Btlr.* (= griphe *Fldr.*) (46 f). Above olive-brown, at the distal margin 3 darker lines, which are confluent on the forewing. On this wing is placed in the ♂ in the middle of cellules 1 b, 2 and 3 between the submedian and the 3 median veins a narrow streak of dark brown, raised scales, which is sharply angled distad on the veins. At the anal angle of the hindwing in cellule 2 a black eye-spot with white double pupil and red-yellow ring. Sometimes in addition a small eye-spot beside it in cellule 1c. In the ♀ the raised scales on the forewing are absent, on the other hand there are on the hindwing in cellules 3—5 two or three further similar eye-spots, which, however, are smaller, sometimes faint or without pupils. The under surface is brownish yellow with a narrow light yellow band across the forewing and a broad white band across the hindwing, irregularly defined on both surfaces, but in the middle much widened by a broad, basally directed projection. In the marginal area are placed on the forewing one, on the hindwing in the ♂ 5, in the ♀ 6 eye-spots, of which the 3rd and 4th on the hindwing are brownish grey, the others black, but all ringed with ochre-yellow and brown and bi-pupilled with white. Venezuela, Colombia (Cauca Valley, Rio Agnatal, 1800 m, [November], Rio Tocha at the Quindiu Pass, 2100 m. [September]).

fida. **E. fida** *spec. nov.* (46 f). Similar to *vesta Btlr.*, but distinguishable at once by the absence of the raised scale-streak on the forewing in the ♂. The eye-spot on the upperside of the hindwing is also absent and the light band on the under surface is differently formed. At the costal margin of the hindwing it is only half as broad as in *vesta*, it does not project basad in the cell but forms small proximal projections in cellules 2 and 5. The ♂ has beneath 6 eye-spots, the 2 middle ones brown-grey, the others black, mostly with single white pupils. On the forewing there are two indistinct smaller ocelli below the subapical one. From the Songo and Corvico in Bolivia.

transversa.

E. transversa *spec. nov.* (47 a). Similar to *vesta* and *fida.* The raised scales of the former are likewise absent here, and there is no eye-spot on the upperside of the hindwing. Of the 3 dark brown marginal lines the inner is indistinct and more proximally directed. On the under surface are placed at the apex of the forewing 2 black ocelli with white pupils and ochre-yellow rings. The marginal area of the forewing in this species is not lighter. But the chief difference is in the underside of the hindwing. The two dark brown, dentate, narrow transverse stripes are removed further distad; the first runs behind the middle of the cell across the origin of the first median vein to the middle of the inner margin and forms in its posterior part the proximal boundary of the white band. The second brown transverse stripe runs over the closing nervure of the cell, intersecting the white band, afterwards forming its distal boundary and uniting with the dark brown submarginal line at the inner angle. Hence the anterior part of the white band is placed in this species in the much widened marginal area. In this area there are 5 ocelli, coloured like those of the forewing, the two in cellules 2 and 5 larger than the rest. From Marcapata (Peru). Rare on the Rio Vitaca (2400 m.) in Colombia.

Nossis Group.

nossis.

E. nossis *Hew.* (= jaresia *Btlr.*). Above brown, at the anal angle of the hindwing a black eye-spot with red-yellow ring and white double pupil. Beneath lighter brown, forewing with 2 straight median lines, a doubly white-pupilled eye-spot before the apex and 3 brown spots below it, also 3 brown marginal lines. Hindwing with 2 brown transverse lines in the middle, the first straight, the second basally curved in the middle. Just behind these a white band traversing the wing, 3 times as broad in the middle as anteriorly and posteriorly, then a row of 4 eye-spots, of which the 2 in cellules 2 and 5 are larger, the others, in cellules 3 and 6 smaller, all black with yellow iris and brown ring, only the larger ones have double white pupils. Ecuador (Quito). This species has some resemblance to the above described *fida,* but is easily distinguished from it by the shape of the white band on the underside of the hindwing, which at its proximal side is uniformly rounded like a sector, whilst in *fida* it is strongly dentate and sinuous. Butler refers (Journ. Linn. Soc. Zool. 13, p. 117) his *jaresia* to *Eupt. furina Hew.* A comparison of the figures, however, shows at once that the two species are not alike, but that *jaresia* belongs rather to *nossis Hew.*

clio.

E. clio *Stgr. i. l.* (47 a). Forewing with the distal margin slightly undulate, hindwing obtusely dentate. Above brown, hindwing with double dark brown marginal and indistinct, broad submarginal line, fringes light grey. Under surface likewise brown. Forewing at $^{3}/_{4}$ of its length with a narrow, straight, light grey stripe, along the distal margin a broad stripe of similar colour, traversed by 2 dark brown marginal lines. On the hindwing first a white stripe from $^{2}/_{3}$ of the costal margin to the middle of the inner margin. In the marginal area are placed 2 large brownish yellow semicircles, the curve of which is directed towards the band. Inside each a glossy silver curved line, which again encloses a large black spot with brownish yellow bordering. On the dark grey distal margin 3 black undulate lines. From Marcapata, Peru. A rare and beautiful species. Coll. Bang-Haas.

albofasciata.

E. albofasciata *Hew.* Size of the preceding. Above reddish brown with broad, white median band from the 3rd median in the forewing nearly to the inner margin of the hindwing. The hindwing has a large black eye-spot at the inner angle with orange-yellow ring and white pupil, as well as 2 white lines at the apex. Under surface somewhat lighter than above, the white band reaching to the costal margin of the forewing. The base is grey with a brown band, the distal margin dull white with 3 parallel brown lines. Forewing with an eye-spot at the apex, hindwing with 6 eye-spots, of which the two middle ones are oval, brown with a silver streak in the middle, the others black, in part with double pupils, but all with reddish yellow rings. From Ecuador. Rare.

Pronophila Group.

pronophila.

E. pronophila *Btlr.* Above olive-brown. Beneath the same, forewing with a broad, somewhat lighter discal band, in which are placed 5 small indistinct ocelli. Hindwing with triangular white discal band, beginning at the apex in a fine point and terminating at the inner margin close to the anal angle with a breadth of 5 mm. Behind this a light brownish band with 5 small eye-spots, of which the 1st, 3rd and 4th are white and surrounded by brown and broad light ochre-yellow rings, the other 2 black, finely pupilled with white and margined with darker yellow. The basal area is finely striated with brown and bears 2 brown transverse lines. From Rio de Janeiro. Coll. Hewitson in the Brit. Museum. Rare.

ordinata.

E. ordinata *spec. nov.* (47 a). Above olive-brown, at the distal margin somewhat darker with lighter fringes. Beneath lighter brown. Forewing with indistinct line behind the middle, 2 brown lines before the margin and black-brown marginal line. Hindwing with broad white band, which runs from the middle of the inner margin across the discocellular to vein 6 near the apex and is not sharply defined on either side. Behind it is placed an orange-yellow band, which only extends from vein 1 b into cellule 4. On this are placed 3 small, round black spots, which are marked on their proximal side with a small, silvery crescent. A black dot is placed in cellule 4 at the end of the orange-yellow band. From Bolivia (coll. Seitz). Similar to the preceding species, but easy to distinguish from it by the orange-yellow band, which is wanting in *pronophila,* as well as by the position of the white band, which in *pronophila* is placed more distally.

ashna. **E. ashna** *Hew.* (47 a). Above brown with small, obscure, darker spot at the anal angle. Beneath somewhat lighter. Forewing with 2 brown transverse lines and 3 marginal ones. Hindwing with a brown transverse line at the base, a straight white band from $^3/_4$ of the costal to $^2/_3$ of the inner margin and 3 black, white-pupilled eye-spots in cellules 2, 5 and 6, the first with double pupil and all margined with red-yellow. Between these eye-spots are placed in cellules 3 and 4 red-yellow rings with small, indistinct silvery centres. *butleri.* The ♀ is marked like the ♂, but somewhat larger. From Colombia, Ecuador and Peru. — **butleri** *Weym.* (= ashna *Btlr.*) is a form of *ashna*, in which the ground-colour of the wings is above yellowish brown and beneath yellowish grey and the red-yellow rings in cellules 3 and 4 on the underside of the hindwing are as dark and enclose as large ocelli as those of the other cellules, forming a row of eye-spots of fairly uniform colouring. Ecuador. The name *butleri Dist.* is a synonym of *metaleuca Bdv.*, hence *butleri Weym.* *ambra.* can be retained for this *ashna* form. — **ambra** *form. nov.* (47 a) approaches *ashna Hew.* Hindwing somewhat more strongly dentate. Above brown with 3 darker marginal lines. Beneath somewhat lighter, especially in the marginal area and at the inner margin of the forewing. Hindwing with white band, almost as in *ashna.* The marginal area behind this band is almost entirely red-yellow, and separated from the band by a brown line. In it is placed in cellule 2 a round black spot with double pupil, another in cellule 5, but surrounded with red-yellow and brown ring and a similar but quite small eye-spot in cellule 6. At the distal margin in addition to the 3 parallel marginal lines a 4th brown submarginal line as distal boundary to the red-yellow marginal area. Between the two inner lines a row of whitish (♀) or light grey (♂) spots. Bolivia, Peru (Cuzco), 2—3000 m.

Liturata Group.

liturata. **E. liturata** *Btlr.* Above pale olive-brown, at the margin darker, fringes reddish grey. Beneath darker, covered with numerous short dark brown streaks, at the costa mixed with whitish. Forewing before the apex with a small black, white-pupilled eye-spot, ringed with ochre-yellow, and with 2 similar, extremely small ones below it. Hindwing on the somewhat lighter brown discal band with 5 equally small eye-spots, of which only the 2nd and 5th are somewhat more distinct. Marginal line black. Locality unknown. Coll. Hewitson in the Brit. Museum.

luttela. **E. luttela** *Weeks.* Above bronze-brown, somewhat glossy, beneath the same colour, without gloss. Forewing between the dark brown marginal line and the distal margin at the apex dusted with yellow, an indistinct brown submarginal line, inner margin grey. On the hindwing the interspace between the 2 dark brown marginal lines is reddish-yellow. A small reddish yellow spot at the anal angle, containing a black central dot. 29 mm. Alezuni in Bolivia. Flies in August. Resembles *liturata Btlr.*, but the eye-spot at the apex of the forewing is absent.

vesper. **E. vesper** *Btlr.* Allied to *liturata.* Above olive-brown. The eye-spots of the under surface are faintly visible above. Under surface copper-coloured, marbled with brown. Marginal line black. Forewing with dark brown discal and submarginal lines, below the apex a single black eye-spot with yellow ring and white pupil. Hindwing with 5 similar ocelli. The 2nd and 5th larger. A brown irregular discal line and the angled submarginal line unite before the inner angle. The club of the brown antenna is rust-coloured. Locality unknown. 35 mm. Coll. Hewitson in the Brit. Museum.

armilla. **E. armilla** *Btlr.* (47 a). Above olive-brown, according to Butler with a very indistinct eye-spot on the hindwing at the anal angle, which is wanting in the example figured. Marginal line black. Under surface brown with dark brown discal, submarginal and double marginal lines on both wings. The ground-colour is somewhat lighter outside the submarginal line before the apex of the forewing and at the margin of the hindwing. A black, white-pupilled eye-spot with ochre-yellow ring before the apex of the forewing and 6 similar eye-spots on the hindwing, which vary but little in size. From the Brazilian provinces of Minas Geraes and Matto Grosso (Cuyaba). According to Herr Bang-Haas *armilla* and the following *strigillata* are seasonal forms of one species. Further observations in respect to this are needed, however, as the forms are very different. *strigillata.* — **strigillata** *form. nov.* (47 a). Above olive-brown, the central area of the forewing from the subcostal to the median covered with thicker, velvety, raised scales, hence standing out more darkly. Fringes grey. Under surface: forewing olive-brown, finely striated with brown all over, the apex brownish grey, also the distal margin, but more narrowly, likewise striated with brown. 2 marginal lines and a submarginal dark brown. Somewhat further back a 4th brown line, which does not reach the inner margin. Between the last-named lines 2 white dots and above them an ochre-yellow eye-spot with white pupil and brown ring. Hindwing grey, marbled with brown, basally darker, at the distal margin lighter with 5 small red-yellow eye-spots, which are white-pupilled and brown-margined. From Cuyaba in the province of Matto Grosso in Brazil.

arius. **E. arius** *spec. nov.* (47 a). Similar to *armilla.* Above brown with 2 darker marginal lines and a strongly dentate submarginal line on both wings. Hindwing with a small round black spot in a somewhat lighter ring at the anal angle. Under surface brown, on both wings dusted with grey at the distal margin. 2 almost straight transverse lines before and behind the middle on both wings, a dentate submarginal line and 2 marginal lines, straight on the forewing, undulate on the hindwing. On the hindwing 5 black ocelli with white pupils and ochre-yellow rings, the 2nd and 3rd ocelli smaller. Sometimes in addition a very small eye-spot in cellule 1b close to the inner margin between the median lines. From the Mapiri.

viridicans. **E. viridicans** *spec. nov.* (47 b). Above olive-brown. Beneath much lighter in consequence of having both wings dotted with greenish grey. The dark brown median lines, the dentate submarginal and the 2 marginal lines are as in the preceding species. On the forewing a small eye-spot in cellule 5, black with white pupil and yellow ring, an indistinct, still smaller ocellus in cellule 3. On the hindwing 5 distinct eye-spots, the 3rd and 4th small and brown, the others black with yellow rings and white pupils, the 3rd to 5th bi-pupilled. 37 mm. From Peru.

monahani. **E. monahani** *Weeks.* Above dark brown, margin somewhat lighter. Forewing beneath black-brown with grey marginal line, brown submarginal line and grey apex. Between the median veins (WEEKS says: above the lowest submedian nervule!) a black eye-spot with white pupil and light brown ring. Above it 2 small white dots and before the apex a small yellow spot. Hindwing proximally black-brown, distally light brown mixed with grey, the distal margin somewhat darker, marginal line grey, a marginal and a submarginal line brown. At the anal angle in cellule 1c a small yellow spot, in cellule 2 a yellow eye-spot with white pupil. From the inner margin a dark brown line runs to the cell. Sometimes the eye-spots are indistinct and the distal margin less grey. 35 mm. From Alezuni in Bolivia. August.

therkelsoni. **E. therkelsoni** *Weeks.* Above dark brown, distally somewhat lighter. Beneath the same, forewing with light brown marginal line, a dark brown, dentate marginal line and a 2nd similar transverse line behind the middle. These lines are indistinct on the forewing, on the hindwing they are repeated, but are more distinct, and join at the anal angle, and there is here an additional, indistinct line in the middle of the cell. Eye-spots and dots are not mentioned in the original description of this species. 38 mm. From the environs of Cochabamba in Bolivia. August.

Ocypete Group.

ocypete. **E. ocypete** *F.* (47 b). Above brown with 2 somewhat darker median bands, a double marginal and a dentate submarginal line, in the anal angle of the hindwing a black eye-spot with double white pupil and yellow ring. The eye-spot is sometimes absent. Beneath light brownish grey with 3 broad brown stripes across both wings, to which is added on the hindwing a short 4th stripe at the base. On the distal stripe on the forewing 1 or 2, on the hindwing 5 eye-spots, black with yellow ring and glossy white double pupils, only the 2nd and 4th are brown. Surinam, Pará. — *helle.* **helle** *Cr.* (47 b), a form of *ocypete*, has on the upper surface dark blue-grey ground-colour with bluish gloss, black veins and 3 black marginal lines, between which the ground-colour is somewhat lighter. The black eye-spot at the anal angle of the hindwing with fine white double pupil. The under surface is similar to that of *ocypete*. Ground-colour bluish white-grey with broad brown bands. On the forewing 3 ocelli, one distinct and 2 obscure, hindwing with 5 eye-spots, all with double silver pupils and yellow iris, the 2nd and 5th black, the others brown. Surinam, Amazons (Iquitos). — *lethra.* **lethra** *Möschl.*, likewise a form of *ocypete*, is above brown; on the underside of the hindwing the eye-spots in cellules 3 and 4 placed more proximally, so that the proximal margins of the entire row of eye-spots form a straight line. The eye-spot in cellule 6 is considerably larger. Further in *lethra* the two transverse stripes of the hindwing run straight into the inner margin, whilst in *ocypete* the outer of these stripes is curved basad at the inner margin, the inner somewhat distad. From the interior of Surinam.

myncea. **E. myncea** *Cr.* Above with a small eye-spot before the apex of the forewing and a similar one at the anal angle of the hindwing. Beneath brownish grey, in the basal area of both wings 2 straight brown stripes, which are both bent basad at the inner margin of the hindwing. On the dark brown discal band, which is 3—4 mm in breadth, are placed on the forewing 3, on the hindwing 5 ocelli, all of nearly equal size, measuring 2—2½ mm in diameter and standing in a straight row, all black with red-yellow ring and silvery blue double pupil. At the margin a brown submarginal stripe and 2 fine marginal lines. 43 mm. From Surinam.

thobici. **E. thobici** *Capr.* is placed by its author as a separate species near to *myncea* and the following differences are given. The two brown transverse stripes in the basal half of the *under surface* are curved and enclose a band, which is somewhat darker than the rest of the ground-colour. Of the three large eye-spots on the forewing of *myncea* the first is scarcely perceptible and the other 2 are almost entirely obsolete. Of the 5 eye-spots of the hindwing the first, second and fifth are very distinct, the last-named somewhat larger, the other two indistinct. All else as in *myncea*. 38 mm. From the province of Rio de Janeiro.

nerita. **E. nerita** *Capr.* Likewise placed by its author in the *myncea* group, which species the wings resemble above except that the brown is darker. In the median area the transverse lines of the under surface show through and on the hindwing the ocellus at the anal angle is present. The under surface is much lighter, the two transverse lines terminate suddenly at the inner margin and are yellow-brown bordered with dark brown. The submarginal line is lunulate and is likewise yellow-brown bordered with dark brown. 3 almost invisible eye-spots on the forewing before the apex, on the other hand on the hindwing 6 distinct ones, the first two and the fifth large, the others small, the sixth without pupil. 37 mm. Province of Rio de Janeiro. This species appears to belong to quite another group.

labe. **E. labe** *Btlr.* Above brown, the forewing with round black spot before the apex, hindwing with black, red-yellow-ringed eye-spot with double silvery pupil, two brown marginal lines and a somewhat widened, undulate submarginal line. Beneath brownish white, 2 straight red-brown stripes across both wings, in the disc of the forewing a large reddish yellow spot, before the apex a black ocellus with red-yellow border and double silvery pupil, on the hindwing 5 eye-spots, of which 2 are larger and like the one on the forewing, the others smaller and brown instead of black. The submarginal line is double and close to the anal angle of the hindwing runs out into a quadrate light rust-red spot. *labe* is distinguished by this spot from the following form. 43 mm. Flies in low-lying districts of Mexico, Guatemala, Honduras, Nicaragua, Costa Rica, Panama *confusa.* and Colombia. — **confusa** *Stgr.* (47 b) is a form of *labe* which varies very much in size (34—46 mm.), but only differs in that the light rust-red spot at the anal angle on the underside of the hindwing is not present and on the upperside of the same wing there are indistinct, obscure dark brown spots in cellules 3 to 5. Its area of distribution is about the same as in *labe*, but in South America *confusa* extends as far south as Ecuador. It is also commoner than *labe*.

palladia. **E. palladia** *Btlr.* (47 b). Above brown, 2 dark brown stripes in the basal half, 2 marginal and an undulate submarginal line, an eye-spot at the apex of the forewing and one at the anal angle of the hindwing with double pupil. Beneath white, 2 median bands, 2 marginal and an undulate submarginal line brown, the proximal lines at the anal angle of the hindwing broader and yellow. Forewing with 3 eye-spots ringed with yellow and brown before the apex, some silver dots and below them a rather large red-yellow spot. Hindwing with 5 eye-spots, the first small and black, the second and fifth large and black, the others brown, all with silver double pupils; in addition a small indistinct ocellus close to the inner angle. From Tapajos, Amazons, Anariver.

terrestris. **E. terrestris** *Btlr.* (47 b). Above brown with 2 dark brown median bands, a submarginal and 2 marginal lines, at the anal angle of the hindwing an eye-spot with white pupil and yellow-brown ring. Beneath brownish grey with 2 red-brown median bands. Forewing with the usual apical eye-spot and 2 silvery spots below it. Hindwing with 5 eye-shaped spots, the first, second and fifth black with yellow ring and double silvery pupil, the silver dot of the others is elongated and bordered with orange-yellow. Surinam, Amazons, Matto Grosso (Cuyaba).

moneta. **E. moneta** *spec. nov.* (47 b). Above olive-brown, with 3 parallel marginal lines on both wings. A small black eye-spot with white pupil and red-yellow ring before the apex of the forewing, a somewhat larger one with silvery double pupil at the anal angle of the hindwing and an indistinct one without pupil and with a brown ring in cellule 5 of this wing. A slight indication of a dark band traverses both wings. Beneath white-grey, with 2 straight parallel brown bands through the middle, the proximal narrower, the distal broader, the latter somewhat washed-out at the proximal side. Before the apex of the forewing a black eye-spot with 2 distally placed silvery pupils just above it and thick silver spots one above the other, just below it 4 similar silver spots in a straight row. Then follows a large reddish-yellow spot. On the hindwing there are two large black ocelli with double silvery pupils (oblique in the anterior ocellus) and red-yellow and dark brown rings. Between these eye-spots 2 large heart-shaped silver spots and close to the costal margin 2 further silver spots, which are similar to those on the forewing. The submarginal line of this species has one peculiarity which does not occur in any of the preceding. It consists of small arcs, 2 placed in each cellule, the convexity distally directed and the points proximally. In this the species resembles the following *penelope*. From Cayenne.

penelope. **E. penelope** *F.* (= clarissa *Cr.*) (47 b). Above yellow-brown with 2 dark brown median bands, 2 marginal lines, finely dentate submarginal line, an eye-spot on the forewing before the apex, in the ♂ without, in the ♀ with silvery pupil. Hindwing in ♂ and ♀ with a similar eye-spot with double silvery pupil at the anal angle and an obscure eye-spot at the apex. On the brownish grey under surface the species is distinguished by having the submarginal line as finely dentate as in the preceding species (*moneta*) and at the proximal side of this line a stripe 2—3 mm. in breadth, sprinkled over with a number of scattered dark brown scales. On the forewing 1 eye-spot, on the hindwing 2 with double silvery pupils and several silvery spots. Brazil, Amazons, Surinam. — *pytheus.* **pytheus** *Möschl.* is a form similar to *penelope* with only one light-yellow-bordered eye-spot at the anal angle of the hindwing, the brown discal band on the underside of the forewing extending nearly to the inner margin, the submarginal line with shallower arcs and the brown dots wanting. From Paramaribo (Surinam).

similis. **E. similis** *Btlr.* The form of this species figured by Godman and Salvin in the Brit. Centr. Am. is regarded as the type, Butler having mixed 2 forms in his original description. 40 mm. On the under surface the ground-colour is light brown as far as the second transverse line behind the middle, marginal area whitish grey traversed by a light brown discal band, on which in cellule 2 of the hindwing are placed a black eye-spot with a yellow ring and a black spot above it. There are no other ocelli. Two fine brown marginal and an undulate submarginal line. From Mexico and Guatemala (? Nicaragua). — *themis.* **themis** *Btlr.* is a very similar form, in which the discal band on the underside of the hindwing is quite faint, so that the eye-spots, of which there are 4 on the forewing and 5 on the hindwing, stand out distinctly. They have all yellow iris and double blue pupils, the second and fifth on the hindwing are black and larger than the others, in addition there is a very small sixth eye-spot close to the inner margin of the hindwing beside the first median band. Of the three approximated marginal lines the middle one is somewhat thickened near the inner margin. Mexico, Guatemala, Honduras, Nicaragua, Panama, Colombia, Venezuela, Trinidad. — *undina.* **undina** *Btlr.* (47 b) is a form of *similis* in which the inner of the two marginal lines on the upperside of the hindwing is twice as broad as the outer. Between the two is placed a lighter line. The submarginal line is somewhat separated. A black eye-spot with white double pupil and yellow ring in cellule 2. On the under surface of the hindwing the dark dusting on the inner submarginal line is strongly expressed, especially near the inner angle. The brown discal band is distinct and shows on the forewing 1, on the hindwing 5 ocelli. 40—42 mm. From Mexico.

cleophes. **E. cleophes** *Godm. & Salv.* Above grey-brown with 2 broad, brown median bands, an undulate submarginal and 2 marginal lines, a black eye-spot with yellow ring and white double pupil before the apex of the forewing, a similar one at the anal angle of the hindwing and a round red-yellow spot between medians 1 and 2 in the disc of the forewing. Beneath the basal area is light grey with 2 reddish grey transverse lines; marginal area almost white with the same eye-spots and red-yellow spot as above, but with a similar eye-spot also in cellule 5 on the hindwing. Between and beside the eye-spots silver dots. 38 mm. Mexico (Acaguizotla, Tierra Colorada and Dos Caminos in Guerrero).

castrensis. **E. castrensis** *Schaus* (47 c). Approaches *undina.* ♀ above brown with 2 marginal lines, a submarginal and 2 median lines, of which the proximal one may also be absent. Hindwing with a black dot at the apex, 2 ocelli at the anal angle, black with white pupil and yellow ring, the larger before vein 2, the smaller behind it. Beneath brownish fawn-coloured, the lines darker than above, forewing with an eye-spot and several brown rings which contain scattered yellow scales. Hindwing in the disc whitish with two larger ocelli in cellules 2 and 5, three smaller ones in cellules 1 c, 3 and 6, and also two placed obliquely and close together in cellule 4. The ♂ is darker, the black dot at the costal margin of the hindwing above is absent. On the under surface the forewing has only a black dot in cellule 5 and on the hindwing instead of the eye-spots in cellules 3 and 4 there are lilac spots with brown bordering. From Brazil: St. Leopoldina and Castro (Parana).

usitata. **E. usitata** *Btlr.* (47 e). Above brown with a dark, straight line behind the middle and 3 marginal lines. Forewing in the ♂ without, in the ♀ with a small eye-spot before the apex, hindwing with 2 eye-spots, black with yellow ring and double white pupil, the larger in cellule 2, the smaller in cellule 3. Under surface lighter than above, with 2 transverse lines through the middle, the forewing with silvery dots below the eye-spot, hindwing with 5 ocelli, the first 2 and the last black with double white pupil (only that of the second is single), the others brownish grey with silvery pupil, but all placed in ochre-yellow rings, surrounded with brown. Venezuela. — *pieria.* **pieria** *Btlr.* is a from of *usitata,* which on the upper surface has only one eye-spot at the anal angle of the hindwing and in which the median lines on both surfaces are strongly curved basad before the inner margin of the hindwing. From Mexico, Guatemala, Honduras, Nicaragua, Costa Rica, Panama. — *pompilia.* **pompilia** *Fldr.* (47 c), a further form of *usitata,* which GODMAN and SALVIN in the Biol. Centr. Amer. state is synonymous with *pieria,* differs according to our figure drawn from the type in ROTHSCHILD's collection in that the median line of the hindwing on both surfaces runs straight to the inner margin; moreover this figure shows at the costal margin of the hindwing above 2 eye-spots, which BUTLER does not mention in his description of *pieria.* From Colombia and Mexico. — *thelete.* **thelete** *Snell.* is likewise a form of *usitata,* on the under surface quite similar to the type-form, except that the silver dots below the eye-spot on the forewing are absent. Above *thelete* is confusingly like our figure of *pompilia Fldr.,* as in addition to the anal ocellus it possesses the same 2 eye-spots at the apex of the hindwing, only somewhat larger. From the island of Curaçao.

austera. **E. austera** *Btlr.* Forewing above olive-brown, with a black eye-spot with silvery double pupil and yellow ring before the apex. Hindwing with 2 similar ocelli at the anal angle, the outer one larger; in the middle a brown curved band, on the margin a brownish yellow terminal line. Beneath grey, before the middle a narrow, behind the middle a broad yellow-brown band across both wings. Then follows in the disc an ochre-yellow band, in which is placed on the forewing one eye-spot as above, on the hindwing 5, the second and fifth black with white pupils and yellow and outer dark brown ring, the others composed of silvery spots margined with ochre-yellow. The margin brown with an ochre-yellow marginal line. 42 mm. From Bogotá.

divergens. **E. divergens** *Btlr.* (47 c). Above olive-brown with three dark marginal lines. The other bands and the eye-spots of the under surface show through faintly above. Under surface lighter with 2 rust-coloured, brown-edged median bands, of which the outer one on the forewing is curved strongly distad at the inner margin. On the forewing 1, on the hindwing 5 ocelli, some of which are black with silvery double pupil and some silvery with brown bordering, but all are surrounded by ochre-yellow rings. In the ♀ there is further a small eye-spot in cellule 2 of the forewing. From Surinam and the Rio Negro (Amazons).

eurytus. **E. eurytus** *F.* (= eurytris *F.*, eurythris *Godt.*, cymela *Cr.*) (47 c). This species is rather common in North America and is easy to recognize by the 2 eye-spots which are placed on the upperside of both wings, of which only the anterior one on the hindwing is less developed in the ♂♂, and may also be absent. In the ♀ there is sometimes on the hindwing a 3rd smaller ocellus between median and submedian. On the light grey under surface are placed on the forewing 2, on the hindwing 4 eye-spots with double silvery pupils and between them further silver dots. — The egg is higher in proportion to its breadth than that of *E. cornelius*, to which it is otherwise fairly similar. The full-grown larva, according to Boisduval and Leconte, is green with 5 white longitudinal stripes (1 dorsal stripe and 2 at each side); according to Holland it is in its earlier stages yellow-brown with a lighter silky stripe and brown spiracles. It lives on grasses. The pupa is light brown with 2 rows of dark dorsal dots, a white line at each side and white bordering to the wing-cases. It is suspended from grass-stems. The butterfly is distributed in North America from Canada through the United States to Nebraska, Kansas and Texas.

periphas. **E. periphas** *Godt.* (47 c). Distinguished from *eurytus* by having only one eye-spot on the upperside of both wings and the underside of the forewing, on the forewing before the apex, on the hindwing before the anal angle. But examples also occur in which on the hindwing above a 2nd very small eye-spot is present at the anal angle. Beneath there are 3 ocelli on the hindwing and between them some fine silvery dots. The pupils of all the eye-spots are much smaller than in *eurytus*. From Brazil and Uruguay.

ocelloides. **E. ocelloides** *Schaus* (47 c). Similar to the preceding species, but considerably smaller. Wings more rounded and above lighter. Ground-colour brownish grey, hence the deep black eye-spots stand out more distinctly. Above with one ocellus on the forewing before the apex and one on the hindwing before the anal angle, sometimes two in the ♀. On the under surface the species is at once distinguishable from *periphas* by the course of the brown transverse line behind the middle of both wings. Whilst in *periphas* this line is fairly straight and runs parallel with the distal margin, in *ocelloides* it is curved several times and on the forewing runs obliquely to the inner angle. Ypisanga, São Paulo, Castro in Parana (Brazil).

biocellata. **E. biocellata** *Godm.* (47 d). Above brown with black, white-pupilled double ocellus in red-yellow ring, the hindwing without eye-spots. Beneath the forewing somewhat lighter, the eye-spot as above, but surrounded further by 2 brown lines, of which the outer one extends in a large curve nearly to the anal angle. The distal half of the hindwing is white-grey and traversed by a darker band, which is intersected with white on the veins. From Bolivia (Tanampaya) at about 2000 m.

rubricata. **E. rubricata** *Edw.* Above brown, forewing with a large rust-red spot between the median veins and a black eye-spot with red-yellow ring and white pupil before the apex, hindwing with a similar eye-spot at the anal angle. Both wings with 3 dark brown marginal lines. On the under surface the forewing is grey-brown and the basal area bright rust-red, ocelli and marginal lines as above, a red stripe running from the costa to the inner margin, two silvery blue double pupils placed below the eye-spot. Hindwing with a brown stripe, proximally margined with light grey, which runs from the costa to the inner margin, and a row of 5 eye-spots before the margin, the first large, the others indistinct, but indicated by silver spots. 35 mm. From Texas, Mexico (North Sonora), Guatemala.

pellonia. **E. pellonia** *Godm.* Similar to *rubricata*. Above brown, forewing in the middle reddish, before the apex a black ocellus with white pupil, red-yellow ring and outer dark brown bordering, at the edge of this a further white dot. In addition a light brownish crescent basally to the ocellus and beside it a dark brown dentate transverse line, which runs obliquely distad to the inner angle and is continued also in a large curve across the entire hindwing. A dentate submarginal and 2 continuous marginal lines on both wings. Beneath as above, but the brown oblique line and the crescent on the forewing are absent, on the other hand on the hindwing a third dentate transverse line is present in the basal area. In this species there are no eye-spots on the hindwing either above or beneath. 42 mm. From Mexico (Milpas and Ciudad in Durango; Bolaños in Jalisco, Chapala).

lethe. **E. lethe** *Btlr.* Above dark brown with two marginal lines, hindwing with undulate discal line and a black anal eye-spot. Beneath much lighter, with 2 dark median lines, the proximal angled, the distal undulate; marginal lines as above. Forewing with 2 ocelli in cellules 2 and 5, which are black with white pupils and yellow rings. Hindwing with 2 similar eye-spots in the same cellules and also 2 smaller ones close to the anal angle, in addition with 2 brown eye-shaped dots between the ocelli. 36 mm. From Venezuela.

argante. **E. argante** *Cr.* (= argulus *Godt.*). Above brown with 3 dark brown parallel marginal lines and a white line between the two distal dark lines. Under surface lighter, the white line with a silvery gloss, the other marginal lines as above, in addition 2 brown lines through the middle of both wings, on the hindwing almost straight, on the forewing diverging anteriorly. On the forewing 4 eye-spots in a straight row, on the hindwing 5 in an angular row, some of them bi-pupilled. 40 mm. From Surinam.

maepius.

E. maepius *Godt.* (47 d). Above brown with 2 marginal lines and a dentate submarginal at some distance from them. On the hindwing with a whitish line between the marginal lines. Forewing with 2 dark brown dots in cellules 2 and 5, hindwing with 3 ocelli, a large one in cellule 2 and two small in cellules 3 and 5, all black with yellow ring, the posterior 2 with white pupils. Under surface lighter with 2 darker lines through the middle. Forewing with 4 small eye-spots, hindwing with 5 ocelli, of which the posterior 4 are larger, some black and some brown, all with double silvery pupils and yellow rings. From Guiana and Brazil.

erigone. *probata.* *proba.*

E. erigone *Btlr.* (47 d). Above olive-brown with dark line behind the middle and 3 marginal lines. Forewing without eye-spots, hindwing with 5 black, yellow-ringed ocelli, of which the 4th is large and blue-pupilled, the 5th small with silvery pupil, the 2nd indistinct. Under surface lighter with 2 brown median lines, angled at the inner margin of the hindwing, and 3 marginal lines (the proximal one undulate), apex of the forewing brownish yellow with a brown band and 3 eye-spots in yellow rings (the lowest larger and with 2 blue pupils). From São Paulo in Brazil, Peru. — **probata** *form. nov.* (47 d). Similar to *erigone*, but above with only a black dot at the anal angle of the hindwing in place of the ocelli. The under surface agrees entirely with *erigone*. From the Mapiri. — **proba** *form. nov.* (47 d). Likewise similar to *erigone*. On the upper surface there is only one black eye-spot, with red-yellow ring and double silvery white pupil, placed at the anal angle of the hindwing. On the under surface the forewing has only one eye-spot and instead of the 2 lower ocelli of *erigone* there are 3 small silver dots. The silvery pupils in the eye-spots in cellules 3 and 4 on the hindwing are prolonged into silvery streaks. The distal of the two dark brown median stripes is somewhat broader than in *erigone*. Peru.

argyrospila. *nausiaca.*

E. argyrospila *Btlr.* Above brown with 3 marginal lines, of which the proximal is undulate. Forewing with small black dot at the inner angle, hindwing with 3 black ocelli in ochre-yellow rings, the middle one large and with violet pupil. Beneath yellowish brown with 2 darker median lines, of which the distal forms a tooth in the middle of the hindwing, with 3 marginal lines. Forewing with 4, hindwing with 5 yellow-ringed eye-spots, some black with silvery double pupils, the others brown with violet single pupils. 38 mm. From Ega (Amazons). — **nausiaca** *Möschl.* Similar to *argyrospila*, but the forewing above with 2, the hindwing with 5—6 eye-spots, all ringed with red-yellow, but mostly blind, only those in cellules 2 and 3 having silvery pupils. Beneath like *argyrospila* in the number of the ocelli, but both the median bands are basally curved before the inner margin of the hindwing, and the tooth of the distal median line in the middle of the hindwing is wanting. From Paramaribo and the interior of Surinam.

crantor.

E. crantor *F.* is a doubtful species for America. According to Fabricius the upper surface is brown, the forewing without spots, hindwing with a black eye-spot with double pupil. Beneath lighter, with darker bands, forewing with 2 eye-spots, hindwing with 5, of which the 1st and 4th are black with double pupil, the 3rd and 5th blind. Fabricius gives the size as the same as that of the Indian *Mycalesis mineus L.*, which measures 44—46 mm. As locality he mentions India. Donovan in his Insects of India figures under the name *crantor* a species which agrees with that of Fabricius in the number of eye-spots, but not in the number of pupils. Godart copies Fabricius' description and adds: „From Brazil." Westwood in Genera Diurnal Lepid. gives as locality Brazil, Pernambuco and Honduras and mentions that the species is in the British Museum, which according to Butler (Proc. Zool. Soc. 1866, p. 467) is not correct. Godman and Salvin, however, regarded the Honduras examples referred to by Westwood as belonging to *E. labe Btlr.* The figure in Donovan is similar in the scheme of markings to the following *ocnus*, but the ground-colour of the underside is more rust-red in *crantor*.

ocnus. *opima.* *pallema.*

E. ocnus *Btlr.* (47 d). Above brown with 3 dark marginal lines, of which on the forewing only the middle one, on the hindwing all three are undulate. At the anal angle of the hindwing a black patch bordered with red-yellow. Beneath lighter, somewhat inclined to violet, with 2 reddish brown median bands, of which the proximal is directed distad at the costa of the forewing, 3 undulate marginal lines; forewing with 1 to 3 small eye-spots before the apex on a brown band, hindwing with 5 eye-spots, the 2nd and 5th large with silvery double pupils, the first the same, but small, the others red-yellow marked with thick silver spots, all margined with brown. From Tapajos (Amazons). — **opima** *form. nov.* (47 d) is a form of *ocnus* which differs on the underside of the hindwing in the 3rd and 4th eye-spots having a brown dot in the middle instead of the silver spots and on the upperside in the dark patch not being bordered with red-yellow. From Jurua. — **pallema** *Schaus* is a further form of *ocnus*, the upper surface altogether without eye-spots or dark patches, but beneath quite similar to the type-form. From Peru.

eriphule.

E. eriphule *Btlr.* Above brown with 3 dark brown undulate lines at the margin and an indistinct dot at the anal angle of the hindwing. Beneath lighter with a thin brown line before the middle, a broader one beyond the middle, the latter broadly bordered distally with light violet and angled at the inner margin of the hindwing; 3 black marginal lines. Forewing without eye-spots, hindwing with 5, ringed with red-yellow, the first 2 and the last black with silvery pupils, the others with thick, oval, silvery dots. 37 mm. From Pernambuco (Brazil).

electra.

E. electra *Btlr.* Dark brown with 3 black marginal lines and a black anal eye-spot with brown ring and blue pupil. Beneath somewhat lighter with the same marginal lines. Forewing with an oblique transverse line behind the middle and without eye-spots, hindwing with 2 median lines and 5 yellow-ringed ocelli, the first 2 and the last black, the others brown, the first 2 with single, the last 3 with double lustrous blue pupils. The ♀ has beneath before the apex of the forewing a yellow dot and below it one larger and 2 smaller, obscure eye-spots. 42 mm. Bahia.

variabilis. **E. variabilis** *Btlr.* Above olive-brown with lighter fringes, 2 dark marginal lines and an undulate submarginal line at some distance from them. Forewing with a faint band behind the middle. Hindwing with 2 black, brown-bordered eye-spots before the anal angle, the upper and larger has 2, the lower only one pupil. On the lighter under surface the forewing towards the apex is sprinkled with brown, with 2 widely separated median lines. The 3 marginal lines as above, without ocelli. Hindwing somewhat inclining to violet, at the base sprinkled with brown, with 2 median lines, the distal one forming an angle in the middle and with 6 ochre-yellow-ringed eye-spots, of which the 3rd is indistinct, the rest some black, some brown and for the most part with double pupils. Aberrations occur with smaller eye-spots. 45 mm. From Brazil (Pernambuco, Rio de Janeiro).

urbana. **E. urbana** *Btlr.* (47 e). Above olive-brown, an undulate submarginal and 2 marginal lines darker, between the latter at the anal angle of the hindwing a brick-coloured line, beside it 2 oval black eye-spots, the distal one in cellule 2 twice as large as the proximal, both with brick-coloured rings and silvery pupils. The under surface is sprinkled with dark brown, the 2 rust-coloured median lines diverge towards the costa of the forewing, but run parallel on the hindwing, the proximal forms a short angle on the forewing, the distal on the hindwing. Forewing with one or 2 blind eye-spots, hindwing with 6 eye-spots, of which the 2nd and the last 2 are darker and larger than the rest, but all have silvery pupils. From Colombia and Paraguay.

affinis. **E. affinis** *Btlr.* Above pale brown with 3 dark marginal lines, between which on the hindwing is placed an ochre-yellow line. A black, blue-pupilled and yellow-ringed ocellus at the anal angle of the hindwing. Under surface ochreous with 2 brown median lines, the proximal straight, the distal on the forewing curved distad at the costal margin, but on the hindwing uniting at the inner margin with the partly angled, partly undulate submarginal line. In the marginal area a brown band, on which in the forewing are placed 3, in the hindwing 5 ocelli, the first on the forewing, the 1st, 2nd and 5th on the hindwing black, the others brown, but all with double silvery pupils and ochre-yellow rings. 42 mm. From Rio de Janeiro, Pernambuco.

vestigiata. **E. vestigiata** *Btlr.* Above olive-brown, 2 median and 3 marginal lines dark brown, 2 very small ocelli with silvery pupils at the anal angle of the hindwing. Beneath much lighter, sprinkled with a number of brown atoms, 2 narrow, yellow, fairly straight median stripes bordered with black at both sides, which only form an angle at the inner margin of the hindwing. The strongly dentate submarginal line is similarly coloured on the hindwing, black on the forewing. Forewing with 3 eye-spots, the first, with yellow ring and silver pupil, before the apex, the others indistinct. Hindwing with 6 eye-spots, the 2nd and 5th black with double silvery pupils, the two middle ones brown and dusted with silver scales, the two outer only small, but all ringed with yellow and brown. 40 mm. From Minas Geraes.

ochracea. **E. ochracea** *Btlr.* (47 e). Above unicolorous olive-brown, distal margin somewhat darker. Beneath yellowish brown, finely dusted with brown, with 2 straight brown median lines, diverging anteriorly, a broad, light ochre-yellow band and a washed-out brownish one. On the latter are placed on the forewing 2, on the hindwing 6 small black eye-shaped spots in somewhat lighter rings, the 2nd and 5th finely pupilled with white. From Ypisanga (Brazil), coll. Lüderwald.

Renata Group.

renata. **E. renata** *Cr.* Above brown with a small eye-shaped spot at the hinder angle of the forewing in cellule 2. Beneath likewise brown, finely striated all over with dark brown, with 2 straight dark brown median lines, an undulate submarginal and 2 straight marginal lines, a small eye-spot before the apex of the forewing and 4 eye-spots on the hindwing, 2 at the apex in cellules 5 and 6 and 2 at the inner angle in cellules 1 b and 2. The eye-spot in cellule 2 measures 3½ mm., that in cellule 5 2½ mm. in diameter, the others are smaller, all are black, with white pupils (the one in cellule 5 bi-pupilled) and bright, broad red-yellow rings. From Surinam. This species appears to have been hitherto misidentified, for the figures of *renata* in the Biol. Centr. Amer. and in Staudinger Exot. Tagf. do not agree with Cramer's figure and text. In these figures the eye-spot on the upper surface of the forewing is wanting, of which Cramer mentions the position very exactly in his description, and the under surface is much lighter, with the ocelli much smaller, than in Cramer and ringed with pale *disaffecta.* yellow. I retain for this form, which must be separated from *renata*, the name **disaffecta** *Btlr.* (47 d). It has no eye-spot on the upperside of the forewing, but on the hindwing a distinct one with red-yellow ring and white pupil. The under surface is much lighter than the upper, especially in the marginal area. The ocelli are much smaller and ringed with pale yellow, and vary in number from 3 to 6. The first and the two middle ones are often very indistinct or entirely absent. Guatemala, Nicaragua, Costa Rica, Panama, Colombia, Venezuela, *remissa.* Amazons. — **remissa** *form. nov.* (47 e) is a form of the preceding, in which the eye-spot on the upper surface at the anal angle of the hindwing has a double white pupil. On the under surface the two somewhat broader median stripes diverge towards the costal angle of the forewing, on the hindwing they run parallel, but bend round proximad at the inner margin, forming 2 teeth. Forewing with an apical ocellus, black with red-yellow ring and white pupil. Hindwing with 6 eye-spots, the first 2 and the last 2 like the one on the forewing except that the first is brown instead of black, the 2 middle ones yellowish brown. From Chiriqui. — **peloria** *Fldr.* *peloria.* (47 e) is a further form of *renata*, in which the first transverse stripe on the forewing is strongly curved on the under surface and the other is proximally shaded with yellowish brown. According to Felder's description the hindwing has beneath 6 eye-spots, of which the first and the two middle ones are very indistinct. Our figure is from one of Felder's types and shows only 3 eye-spots. Venezuela.

E. mythra *Stgr. i. l.* (47 e). Above olive-brown with 2 brown marginal lines, and at some distance from *mythra.* them an undulate submarginal, between the former on the hindwing a whitish line and at the anal angle a small black ocellus with white pupil and red-yellow ring. Beneath brownish grey, finely irrorated with brown and with 2 straight parallel median lines and in the lighter marginal area a brown band, on which on the forewing are placed 3 rather obscure eye-spots, on the hindwing 5 small ones. The first 2 and the last on the hindwing are black, the others brown, all with double dull white pupils and surrounded by ochre-yellow and outer brown rings. Bolivia.

E. abretia *Capr.* (46 f). Above light olive-brown. The straight light band on the under surface shows *abretia.* through somewhat above, and the 3 marginal lines are also visible. Beneath there is a brown, angled line before the middle, and in the marginal area of the hindwing a row of 6 fine black dots, the first with an extremely fine white pupil. Brazil (Valença, Petropolis). Flies in September.

E. angularis *Btlr.* (47 e). Differs somewhat in the shape of the wings. The apex of the forewing is obtuse. *angularis.* The hindwing is angled at the submedian and at medians 1 and 2, the inner margin somewhat excised. Above olive-brown, marginal lines and anal spot very indistinct. Under surface yellowish grey, finely irrorated with dark brown, with 2 straight reddish brown median lines, a strongly dentate submarginal line and 2 marginal lines on both wings. Forewing with 5 scarcely visible, white, brown-bordered dots (sometimes in yellow rings). On the hindwing 6 small eye-shaped spots or dots, of which the 1st, 3rd and 4th are scarcely visible, the others distinctly black with yellow rings, the 5th somewhat larger and bi-pupilled. Minas Geraes (Butler), Estaçao Raiz da Serra (Estado São Paulo); December (Lüderwald).

E. punctata *spec. nov.* (47 e). In the shape of the wings quite similar to the preceding species, but the *punctata.* under surface is quite differently marked. Above olive-brown, forewing without marginal lines, only the fringes somewhat lighter. Hindwing with 2 marginal lines, the distal indistinct, the proximal darker and distinct, with an obscure submarginal line composed of large lunules. Under surface yellowish grey, with slight darker irroration. A fine, brown dentate line runs through the cell of both wings with single darker dots on the veins, in the distal half of the wings 2 broad light parallel stripes, the proximal yellowish, the distal whitish yellow. Proximally to the first stripe there is a row of fine black dots on the veins, connected by proximally directed brown lunules. A similar row of dots is placed outside the distal stripe, on which are placed the distally directed lunules of the submarginal line. These lunules likewise bear black dots in the middle of the cell. Two further rows of dots (the 4th and 5th) are placed on the almost straight marginal lines, which are only undulate in the posterior part of the hindwing. There is also a single black dot with white pupil in cellule 2 between the 2 lighter stripes. From Minas Geraes (Brazil), coll. Weymer.

E. straminea *Btlr.* Forewing somewhat longer, the apex consequently more pointed than in the allied *straminea.* species. The distal margin of the hindwing forms an obtuse angle on vein 3. Above olive-brown, in certain lights copper-coloured, with 2 brown marginal lines, an undulate submarginal line and an indistinct anal ocellus. Beneath ochre-coloured, finely dusted with brown, in the disc pale rose-red, 2 widely separated brown median lines, the distal one proximally margined with yellowish brown, marginal lines as above, between them a yellow line. In the disc a brown band, on which are placed on the forewing 1, on the hindwing 4 eye-spots (2 at the apex and 2 at the hinder angle), all with yellow ring and glossy white pupil, sometimes double. 50 mm. From Minas Geraes (Brazil).

E. celmis *Godt.* (47 f). Above brown with 2 dark brown lines and a distal black line at the margin, *celmis.* between which the ground-colour is somewhat lighter, with a small yellow-ringed eye-spot at the anal angle, in the ♂ without, in the ♀ with pupil. Beneath brownish grey, finely irrorated with brown, with 2 angled darker lines through the middle and the 3 marginal lines as above, 1 ocellus on the forewing and 5 or 6 on the hindwing, all small, the 2nd and 3rd on the hindwing mostly indistinct, the others black with yellow ring and fine white, mostly double pupils. From Brazil, Argentina, Paraguay. Common. The species varies as regards the number of the ocelli and their distinctness, also the size ranges from 34—44 mm. — **melchiades** *Btlr.* is a form *melchiades.* of *celmis* in which on the hindwing above 2 eye-spots are present at the anal angle, of which the first is 3 times as large as the last. On the under surface there are 5 small ocelli on the forewing, the 2nd somewhat larger, and 6 on the hindwing, the 2nd and 5th being the largest and the 3rd consisting of 2 eye-spots obliquely adjoining *bonariensis.* one another. From Cordoba. — **bonariensis** *Burm.* (47 f) is a further form of *celmis*, which on the upper surface has neither eye-spots nor dots and beneath only brown rings instead of the eye-spots. From Buenos Aires.

grimon. **E. grimon** *Godt.* (47 f). Above olive-brown with undulate submarginal and 2 dark brown marginal lines, between the latter on the hindwing a whitish grey line. Beneath light brownish grey, finely dotted with brown, with 2 dentate darker lines through the middle and the 3 marginal lines as above. Forewing with 3 eye-spots, only the first distinct, the others obscure. Hindwing with 5 eye-spots, the first 2 and the last black with double white pupil, the others composed only of brown rings with ochre-yellow pupils. From Brazil.

phronius. **E. phronius** *Godt.* (47 f). Above grey-brown, with indistinct darker marginal lines and similar submarginal line, also an indistinct dark dot at the anal angle of the hindwing. Beneath yellowish grey, finely dotted with brown all over, with 2 dentate darker transverse lines through the middle, on which at each vein is placed a dark brown dot. Marginal area somewhat lighter, containing 1—4 white dots on the forewing, 4—5 on the hindwing. Sometimes some of these dots are double or present incompletely formed dark rings. St. Catharina (Brazil).

acmenis. **E. acmenis** *Hbn.* (51 b). Above black-grey. Beneath more brownish grey, sprinkled with dark brown dots. The dark brown median lines are fairly straight on the forewing, on the hindwing strongly undulate and running parallel with the distal margin. The median area enclosed by them is dark brown on the hindwing. The marginal area becomes gradually darker towards the distal margin, but shows no eye-spots or dots. The fringes light brownish. The locality of this species is unknown, for that given by Hübner (Baltimore) is incorrect. It resembles the preceding species, but the median band is much more strongly curved in *acmenis* and the white dots in the marginal area, as well as the dark brown dots on the median lines, are absent.

Paeon Group.

paeon. **E. paeon** *Godt.* (51 b). Margin of the hindwing obtusely dentate, in the ♂ more strongly, in the ♀ more weakly. Above grey-brown, with an undulate submarginal and 2 marginal lines dark brown. Of the latter the inner is proximally widened and on the hindwing forms crescentic spots between the veins. An undulate whitish line between these marginal lines. At the anal angle of the hindwing a small, round, dark brown spot, which in the ♀ is larger, in the ♂ smaller or absent. Beneath there are on the forewing in addition to the lines of the upper surface 2 straight median lines and a small eye-spot before the apex. The hindwing is brownish grey or brownish yellow in the basal half and at the costal margin, becoming gradually darker posteriorly, marbled all over with dark brown. Two dark brown, strongly dentate transverse stripes run from the costal to the inner margin. In the marginal area 4 small black eye-spots with double white pupils, 2 at the apex and 2 at the *marmorata.* inner angle. Rio de Janeiro and St. Catharina. — **marmorata** *Btlr.* (47 f) is a form of *paeon* in which the under surface is much lighter and the dark brown posterior half of the hindwing in the type-form is restricted to a dark spot at the distal margin. All else as in that, hence the transverse lines stand out more distinctly. Rio de Janeiro, St. Catharina, Rio Grande do Sul.

ernestina. **E. ernestina** *spec. nov.* (47 f). Similar to *paeon*, but the shape is rounder, the distal margin but slightly undulate, not dentate, and above in addition to the anal spot of the hindwing a round black spot is present before the apex of the forewing, which is wanting in *paeon*. On the underside of the forewing the 2nd transverse stripe is not straight, but distally curved and here are placed 3 eye-spots, a black one with yellow iris and white pupil before the apex, and 2 smaller ones below it, consisting of brown rings with double, oval, silvery pupils. On the hindwing the transverse stripes are broader, the second is forked anteriorly and behind it are placed 5 eye-spots, of which those in cellules 2, 5 and 6 are black with white pupils, yellow iris and brown rings, whilst those in cellules 3 and 4 consist merely of brown rings with double, oval, silvery pupils. From Esperito Santo (Brazil).

Hermes Group.

ambigua. **E. ambigua** *Btlr.* (48 a). Above brown with 3 indistinct marginal lines, the proximal one dentate. Hindwing with ochre-yellow marginal line. Beneath lighter, the first transverse line irregular, the second curved round at the inner margin of the hindwing, the marginal lines as above. Both wings with 5 ocelli, which have brown rings and mostly double silvery pupils and on the hindwing are placed in an angular row. From Rio de *modesta.* Janeiro. — **modesta** *Btlr.* Similar to the preceding, somewhat larger, above brown, of the 3 marginal lines the proximal one is undulate. Beneath brownish grey with 2 oblique, but fairly straight, red-brown median lines. The marginal lines as above. Forewing with 3 ochre-yellow-ringed eye-spots, of which the first has a double silvery pupil. Hindwing with 5 ocelli, which have red-yellow rings and partly single, partly double silvery *huebneri.* pupils. From Pará and Cametá (Amazons). — **huebneri** *Btlr.* is above quite like *ambigua*, beneath the ground-colour is more brownish at the base, more grey at the apex, ochre-coloured at the hindmargin. The median transverse lines are red-brown and the first is nearly straight. On the hindwing there is a 6th small eye-spot *benedicta.* at the anal angle. Pará. — **benedicta** *Btlr.* is similar to *huebneri*, but differs in the larger eye-spots of the under surface, the number of which Butler gives as 6 for the hindwing; some of these are black and some brown, the 4 middle ones have double white pupils, but all have yellow iris and outer brown rings, and the 2nd and 5th are larger than the others (in Butler's figure the 6th ocellus at the inner margin is absent). On the forewing there is a similar eye-spot before the apex and 2 obscure ones below it. The median bands are chestnut-brown and diverge somewhat anteriorly. From Sarayacu (Ecuador).

galesus. **E. galesus** *Godt.* Above brown, unspotted. Beneath likewise brown, with 3 dark brown transverse lines, 2 across the middle, 1 before the margin. The outer median line shaded with violet-grey at the distal side. The marginal line is undulate and before it is placed on the hindwing a row of 5 black dots. From Brazil. Whether the butterfly figured by Butler (in the Journ. Linn. Soc. Zool. Vol. 13, pl. 12, fig. 12) really belongs to this species is questionable, as the hindwing bears a row of 5 light-pupilled eye-spots instead of the dots.

melobosis. **E. melobosis** *Capr.* (46 f). Above brown with a dark brown median line on the forewing and 3 marginal lines on both wings. On the somewhat lighter under surface 2 transverse lines cross both wings, the first strongly curved, the second undulate on the forewing; between the two the ground-colour is darker. In the marginal area on the forewing 4, on the hindwing 6 small eye-spots, black with glossy white pupils and yellowish brown iris. From Chapeo d'Uvas (Minas Geraes). Flies in November.

umbrosa. **E. umbrosa** *Btlr.* Above according to its author's description greenish grey (but his figure is more blue than green) with 2 grey marginal lines on the hindwing. Fringes and body brown. Beneath lighter, white-dusted, traversed by 2 median stripes, 3 brown marginal lines, forewing with a small black ocellus before the apex; hindwing with 5 yellow-ringed eye-spots, the 2nd and 5th black with white pupils, the others brown. From Ecuador.

undulata. **E. undulata** *Btlr.* (48 a). Above brown. Beneath lighter, dusted with grey, the 2 median lines on the forewing more widely separated, posteriorly strongly dentate, the submarginal lines dentate, the other marginal lines almost straight. Forewing with 4 very indistinct, hindwing with 6 distinct small eye-spots, the 2., 4. and 5. with black central dot. From Pará.

mitchelli. **E. mitchelli** *French.* Size of the preceding species. Above brown. Beneath with indistinct median and marginal lines, forewing with 4, hindwing with 6 eye-spots in a straight row, which are placed somewhat further from the distal margin than in the allied species. These eye-spots are black, with yellow rings and blue pupils. Found in the states of New Jersey (near Lake Hopatcong) and Michigan.

maimounè. **E. maimounè** *Btlr.* Dark olive-brown. Hindwing in the posterior half with black submarginal line. On the under surface the forewing is sprinkled with ochre-yellow scales, the median stripes rather broad, diverging towards the costa of the forewing, in addition there is a brown streak on the discocellular of this wing. The forewing has 5 eye-spots with light yellow rings, mostly without pupils, the hindwing 6 rather large eye-spots (the 2nd measuring 4 mm. in diameter) with red-yellow and outer brown rings, some of which touch the submarginal line, and the greater part with silvery pupils. From Pebas on the Upper Amazon (Peru); Costa Rica.

camerta. **E. camerta** *Cr.* Above brown. Forewing before the apex with a small eye-spot with yellow ring and silvery pupil. Under surface of the forewing with 4, of the hindwing with 6 similar ocelli of the same size, all with silver pupils, both wings with 2 brown, parallel median lines, curved on the hindwing, and with 3 marginal lines. From Surinam. Godman and Salvin indeed unite this species with *hermes*, *sosybius* and *fallax*, but do not mention in their description the silver-pupilled eye-spot on the upper surface which Stoll distinctly describes in the 4th volume of Cramer's work. Hence I regard *camerta* as a separate species.

hermes. **E. hermes** *F.* (= sosybius *F.*, canthe *Hbn.*, nana *Möschl.*) (48 a). Above unicolorous brown, without markings. Forewing beneath with 3—5 eye-spots, of which sometimes only the 2nd is distinct and the others are more or less obsolete. Hindwing with 6 ocelli, the 2 middle ones indistinct, the others black with brownish yellow rings, sometimes all distinct. The species varies very much and has a wide range of distribution, from New Jersey in the United States through Mexico, Central America, Colombia and Surinam to South Brazil, but occurs everywhere in different forms. Fabricius in his description of *hermes* has confused different species with one another, but as Butler states in the Proc. Zool. Soc. 1866 that he has compared the type of *hermes* and finds it identical with *canthe Hbn.*, and as he further declares in the Ent. Monthly Mag. 1870, p. 251, that *sosybius F.* is a synonym of *hermes*, the latter name must be accepted for the type-form. The early stages have been described in detail by Edwards. The egg is hemispherical, flattened at the base, with slight depression at the sides; greenish white. The young larva hatches 4 days after the egg is laid; it is white, with fine hairs, after the first moult light green, with a broad dark green longitudinal stripe across the back and narrower lateral stripes; between these stripes are placed rows of small white tubercles. Head rather large, anal extremity forked. The larva moults four times. After the last moult it is emerald-green with several yellow lateral stripes. Head covered with fine, raised, yellow dots. On grass. The pupa is suspended, short and thick, at the head obtuse, green, posterior part yellow-green with some black dots and a brown stripe. The butterfly appears in 14 days. In Mexico, according to Edwards, there are 2 generations. — **fallax** *Fldr.* (= atalanta *Btlr.*) (48 a) *fallax.*

is a form of *hermes* in which the median lines on the underside of the forewing converge towards the inner margin and on the hindwing are strongly angled. The number of eye-spots (3—5 on the forewing, 6 on the hindwing) agrees with *hermes*. From the Rio Negro, Venezuela, Pará. *pimpla.* — **pimpla** *Fldr.* is a form likewise belonging here and only distinguished from *fallax* by the brown median lines on the underside of the forewing not converging, but diverging, towards the inner margin; the number of eye-spots is the same. From Rio Negro (Amazons). *narapa.* — **narapa** *Schaus* is a further form of *hermes*, in which the outer median line on the underside of the forewing is distally shaded with white, and which has 4 ocelli on the forewing and 5 on the hindwing. From Castro in Parana (Brazil).

poltys. **E. poltys** *Prittw.* (48 a). Above grey-brown with 2 dark median lines and a short transverse streak on the discocellulars, an undulate submarginal and 2 marginal lines; the last-named 3 and the inner of the median lines are also continued on the hindwing. Between the marginal lines the ground-colour is lighter. One or two black, yellow-ringed spots at the anal angle. On the grey under surface the median lines are double and the outer one is distally accompanied by a brownish stripe, which extends from the costa of the forewing to the middle of the hindwing. Behind it 6 very small eye-spots. From Rio de Janeiro (Corcovado) and Rio Grande do Sul. *binalinea.* — **binalinea** *Btlr.* (48 a) is a form of *poltys*, which only differs in the absence of the dark median shading at the distal side of the 2nd median line. From Venezuela and Brazil (Pernambuco).

eous. **E. eous** *Btlr.* (48 a). Above olive-brown with a yellow-ringed dot at the anal angle of the hindwing and 3 dark marginal lines. Beneath light grey, the transverse lines very fine, angled, at the costal margin of the forewing curved basad, the outer one distally curved in the middle of the hindwing. Before the apex of the forewing 3 or 4 white dots, partly with dark margins, hindwing with 5 small black eye-spots, of which only the 2nd and 5th measure about 1—1½ mm., the 3rd and 4th are indistinct, but all have white pupils. From Brazil (Pará, Esperito Santo), Paraguay. *zeredatha.* — **zeredatha** *Btlr.* (48 a) is a form of *eous* in which all the ocelli on the underside are very small and punctiform. From Rio de Janeiro.

soter. **E. soter** *Btlr.* Distal margin of the forewing almost straight, that of the hindwing undulate, the inner margin of the hindwing before the anal angle emarginate. Above olive-brown, a black spot on the transverse vein of the forewing, a straight transverse line behind the middle, a dentate submarginal line and 2 marginal lines brown, between the latter a brick-coloured line. Hindwing with 2 small eye-spots at the anal angle. Under surface reddish brown, sprinkled with dark brown, with a broad darker band, which runs from the middle of the costal margin on the forewing to the middle of the inner margin on the hindwing and is bordered at each side by a brown line. Forewing with a small silver-pupilled ocellus before the apex, hindwing with 6 small eye-spots in an irregular row, the 2nd and 5th with silvery double pupils, the 4th indistinct. Novo Friborgo (Brazil).

Phares Group.

phares. **E. phares** *Godt.* (48 b). Above yellowish brown with a brown line behind the middle and 3 brown marginal lines, on the forewing in the ♂ with an eye-spot before the apex, in the ♀ with 2 or more eye-spots, hindwing with 5 or 6 in both sexes, of which the 2nd and 5th are large, black with double white pupil and red-yellow ring, the others mostly obscure and indistinct. On the under surface the forewing is reddish yellow with yellowish grey marginal area, the hindwing yellowish grey with 2 brown, more or less curved median lines, the eye-spots more distinct than above and all with white, sometimes silvery pupils. Argentina (Entrerios, Cordoba), South Brazil, Venezuela. Not rare. Varies in the number of the eye-spots on the upper surface, examples occurring which above have no ocelli at all on the forewing and others which have only 2 on the hindwing. — A similar form has *spartaeus.* been described and figured by Burmeister under the name **spartaeus**. It has one eye-spot on the upperside of the forewing and 2 on the hindwing. The latter has on the under surface 6, the forewing 3 comparatively small eye-spots, the two largest measuring little more than 1 mm. They are all black with yellow ring and white, sometimes double pupils. Burmeister has only described the ♀, which has an expanse of 40 mm. From Entrerios. *pharella.* — **pharella** *Btlr.* (48 d) is a smaller form of *phares*, which has an expanse of only 28 mm. Above unicolorous olive-brown without eye-spots. Under surface of the forewing ochre-yellow, with distal margin grey, and with 3 ochre-yellow-ringed eye-spots with violet pupils. Hindwing grey, the median lines almost straight, behind the distal one a whitish stripe with 4 yellow-ringed ocelli in cellules 2—5, the 2 distal ones black with white pupils, the others brown with violet pupils. From Rio de Janeiro. *pharnaces.* — **pharnaces** *form. nov.* (48 b) is a further form of *phares*, in which the brown stripes in the basal half of the hindwing beneath are darker and strongly dentate, moreover the median line on the underside of the forewing is not straight, but forms a wide curve distad. From South Brazil.

innocentia. **E. innocentia** *Fldr.* (48 b). One of the smallest species. Above unicolorous brown. Beneath likewise brown with 2 somewhat curved transverse lines before and behind the middle, behind the 2nd on the hindwing a light stripe, in the marginal area on the forewing 3 or 4, on the hindwing 5 or 6 ocelli, with white pupils and yellow and brown rings. From Venezuela.

numilia. **E. numilia** *Fldr.* (48 b). Above light brown, forewing with a straight dark transverse line behind the middle, hindwing with 2 such lines and 2 distinct eye-spots at the anal angle and 3 indistinct ones above them. Beneath yellowish grey-brown with 2 fairly straight median lines, 5 obscure eye-spots on the forewing and 6 distinct ones on the hindwing with yellow and brown rings and white pupils, the 5th somewhat larger with double pupil. From Muzo, to the north-west of Bogotá (Colombia).

Harmonia Group.

gulnarè. **E. gulnarè** *Btlr.* (48 b). Above unicolorous brown. Beneath likewise brown, only at the inner margin of the forewing somewhat lighter, with 2 dark brown median bands, on the forewing nearly straight, on the hindwing somewhat curved. The submarginal line is characterized by its forming 2 small curves in each cellule on both wings, whilst in most species there is only 1 curve in each. In the number of the eye-spots and dots the two figures of this species hitherto published differ, although they are drawn from the same example. BUTLER figures on the forewing 5 eye-spots and 2 dots above them, on the hindwing 6 eye-spots, whilst GODMAN and SALVIN figure only one eye-spot on the forewing and 5 on the hindwing. All the eye-spots are without the yellow rings. The example figured here has on the forewing 3 white dots, the middle one finely margined with black, on the hindwing 5 eye-shaped, round black spots, of which only the 1st, 2nd and 5th have white pupils. BUTLER's example came from Panama (coll. SALVIN), the one figured here from Mapiri (coll. BANG-HAAS). STAUDINGER (*i. l.*) had named it *civica*.

jovita. **E. jovita** *Fldr.* (47 f). Above unicolorous brown. Inner angle of the hindwing obtusely produced. Beneath with 2 nearly straight darker median lines, the 2nd curved round basad before the inner margin of the hindwing, behind it a much lighter stripe, especially on the hindwing, and on the forewing 3—4, on the hindwing 5 ocelli, of which on the forewing the posterior one, on the hindwing the 3rd and 4th are indistinct. From Colombia (Bogotá, Rio Agna Valley). September.

harmonia. **E. harmonia** *Btlr.* (48 b). Above likewise unicolorous brown. Under surface of the forewing brownish grey, of the hindwing light grey, so that the undulate transverse lines stand out distinctly. Forewing with 4, hindwing with 5 or 6 eye-spots, of the former only the 2nd, of the latter only the first 2 and last 2 distinct. From Ecuador (Quito) and Colombia (Mount Quindiu, 2100 m.). October.

phineus. **E. phineus** *Btlr.* (= eugenia *Fldr.*) (48 b). Above unicolorous brown, beneath much darker than *harmonia*, the median stripes broader. Forewing with only one eye-spot. Hindwing with 6 ocelli, of which those in cellules 3 and 4 also stand out distinctly, all having white, some of them double pupils. From Cuzco in Peru, the Songo in Bolivia, and Venezuela.

calixta. **E. calixta** *Btlr.* (= cucullixta *Stgr. i. l.*) (48 c). Above dark olive-brown. Beneath lighter, the median stripes on the forewing nearly straight, diverging anteriorly, on the hindwing the outer one bicurved and before the inner margin angled. Forewing with 5 eye-spots with silver pupils and yellow rings, the 2nd larger, the 3rd and 4th small, hindwing with 6 similar eye-spots, the 2nd connected with the 3rd, the 1st, 3rd and 4th small, the 2nd large. From Bogotá. — *cucullina.* **cucullina** *form. nov.* (48 c) is a form of *calixta* in which the eye-spots on the underside of the hindwing are of almost equal size, only the first and last are smaller and the black ring of the 2nd is somewhat broader. From Choco (Colombia).

alcinoë. **E. alcinoë** *Fldr.* (48 c). Above unicolorous brown. Beneath grey-brown, the median lines nearly straight. Forewing with 4, hindwing with 5 eye-spots in a somewhat angled row, of which the first on the forewing and the 2nd and 5th on the hindwing are larger. From Colombia and Venezuela. Our figure from FELDER's type in the Tring Museum.

yphthima. **E. yphthima** *Fldr.* (48 c). Wings rather rounded, above brown with an eye-spot at the anal angle. Beneath the marginal area of the hindwing is lighter than the rest of the ground-colour and the submarginal line runs almost as straight as the marginal lines. Forewing with one or more indistinct eye-spots, hindwing with 5 eye-spots of equal size with double white pupils. The ♀ has further on the upper surface 2 black blind spots on each wing. From Bahia and Bolivia. Figure from one of FELDER's types. — *pacta.* **pacta** *form. nov.* (48 d) is a form of *yphthima* which differs in the somewhat undulate distal margin of the hindwing, and in the larger and more numerous eye-spots on the under surface. Moreover the pupils in these eye-spots are single, but much larger, and some of them silvery. The forewing has 4, the hindwing 6 eye-spots, the 2nd and 5th larger than the rest. From Cuyaba in Matto Grosso (Brazil). Coll. BANG-HAAS.

nebulosa. **E. nebulosa** *Btlr.* (48 d). Above olive-brown, without eye-spots, only with the 3 marginal lines. Beneath little lighter, the median lines on the forewing fairly straight, on the hindwing finely denticulate, the former with one small eye-spot, the latter with 5 ocelli, all with white pupils and yellow rings, the 2nd and 5th large and black, the rest brown. From Venezuela, Peru, Bolivia.

perfuscata. **E. perfuscata** *Btlr.* (48 d). Above likewise unicolorous olive-brown only with the 3 darker marginal lines. Beneath somewhat lighter and somewhat tinged with violet, the median lines nearly straight, only the distal one curved round basad at the inner margin of the hindwing. Marginal area somewhat lighter, on the forewing 4, on the hindwing 5 ocelli, some brown, others black, some with one, others with 2 pupils. From Pará and Esperito Santo (Brazil).

sylvina. **E. sylvina** *Fldr.* (48 c). Upper surface brown, the submarginal line placed somewhat further from the marginal lines than usual. Beneath somewhat dusted with violet, the transverse lines very fine, the submarginal line as above, strongly dentate, the forewing with one, the hindwing with 5 small eye-spots, the 3rd and 4th indistinct. From Bahia (Brazil) and Cuzco in Peru. Figure from FELDER's type.

numeria. **E. numeria** *Fldr.* (= historie *Stgr. i. l.*) (48 c). A small species. Above brown, beneath little lighter with 2 straight, fine dark brown median lines. The marginal area lighter with the 3 marginal lines and 5 ocelli on each wing, all small and of uniform size, yellowish brown with small black centres finely pupilled with white and surrounded by brown rings. From Bahia. Figure from FELDER's type.

manasses. **E. manasses** *Fldr.* (48 c). Above brown, hindwing with 2 black eye-spots in red-yellow rings and with pale-coloured pupils, the outer large, a third, indistinct, above them. Under surface dark to the 2nd straight transverse line, marginal area lighter, especially on the hindwing. Forewing without eye-spots, hindwing with 6 small ones in an angled row. From Bahia. Figure from FELDER's type.

mimas. **E. mimas** *Godm.* (48 d). A larger species. Similar to the preceding, but the wings broader and the distal margin of the forewing less rounded, also the hindwing with somewhat stronger excisions. Above brown with 2 eye-spots at the anal angle of the hindwing, the larger in cellule 2 with double white pupil and yellow ring, the smaller in cellule 1c with single pupil. Beneath yellowish brown, strongly sprinkled with dark brown; 2 straight brown median lines, enclosing a darker median area. In the lighter marginal area are placed on the hindwing 6 ocelli, mostly bi-pupilled, the 3rd removed somewhat proximad and occasionally double. From Corvico in Bolivia.

oreba. **E. oreba** *Btlr.* Size of the preceding species, the forewing more pointed, above unicolorous brown, without eye-spots. Beneath somewhat lighter, distally dusted with grey, the dark brown median lines on the forewing somewhat curved, as also the inner line on the hindwing, while the outer forms a short angle on each vein and crosses the extremity of the cell. The submarginal line on both wings forms 2 small lunules in each cellule with their concavity towards the base (as is also the case in *gulnarè*). On each wing 5 eye-spots, the 1st, 2nd and 5th black with yellow iris, the others ochre-yellow, all with white pupils. In addition there are at the anal angle of the hindwing two very indistinct eye-spots in cellule 1 b. The locality of this species is unknown. BUTLER described it from an example in coll. KADEN (now Mus. DRUCE).

eremita. **E. eremita** *spec. nov.* (48 d) is like *oreba Btlr.* in size and shape, but shows essential differences in the scheme of markings on the under surface. The ground-colour of the underside is darker, less sprinkled with grey. The 2nd transverse line does not intersect the end of the cell on the hindwing, but passes round it at some distance in a curve, forming a proximally concave crescent in each cellule. The submarginal line in its whole course on both wings likewise forms only one crescent in each cellule, whilst in *oreba* it forms two in each. The forewing has 4, the hindwing 5 ocelli. — From Marcapata in Peru (coll. BANG-HAAS).

obscura. **E. obscura** *Btlr.* Above unicolorous brown, beneath likewise brown, the transverse line beyond the middle is irregularly curved and dentate, at the inner margin of the hindwing it unites with the submarginal line, which forms only one crescent in each cellule. On the forewing there are 3 small white dots before the apex, on the hindwing 5 eye-spots, the 2nd and 5th black with yellow iris and white pupil, the rest entirely filled up with brownish ochre-yellow and of a reniform shape. Of these only the one placed at the costal margin has a white pupil. Size 53 mm. From Bolivia.

Necys Group.

necys. **E. necys** *Godt.* (= vastata *Btlr.*, Tayg. neonympha *Fldr.*) (48 d). Wings rounded. Above unicolorous brown. Beneath finely dotted with darker, with strongly dentate median lines, a similar submarginal line and 5 or 6 fine white dots on each wing in the marginal area. From Brazil (Rio Grande), Colombia (Rio Agna Valley, 1600 m., Quindiu Pass, 2500 m.). — *rustica.* **rustica** *Btlr.* (? = Tayg. anophthalma *Fldr.*) (47 g). A form of *necys* in which on the underside of the forewing there is a small white spot beside the first white dot and the other white dots on the forewing are absent, but all are present on the hindwing. From Bolivia and Huamboya in Ecuador.—*fabiana.* In **fabiana** *Btlr.* the median lines are not dentate, but only weakly curved and the white spot at the costal margin of the forewing of *rustica* is wanting. From Macahe in the province of Rio de Janeiro.

polyphemus. **E. polyphemus** *Btlr.* (47 g). Above unicolorous brown, beneath but little lighter, the outer median line is on the forewing twice, on the hindwing several times angularly bent proximad. Forewing with 3 small white dots before the apex; hindwing with 4 or 5 extremely small and one large, distinct black eye-spot before the anal angle, the latter and some of the former with white pupils. From Colombia (Bogotá, Carmen), Bolivia. — *cyclops.* **cyclops** *Btlr.* (= umbracea *Btlr.*) (47 g) is a form of *polyphemus*, in which on the under surface the outer median line of the forewing is not angled, but forms only a slight curve. Moreover on the hindwing the single small lunules of this line run in a straighter direction. The black ring of the eye-spot in cellule 2 of the hindwing is very broad. From Panama, Costa Rica, Peru, Ecuador.

quantius. **E. quantius** *Godt.* (= morima *Schaus*) (47 g). Above unicolorous brown. Beneath likewise brown, with 2 darker almost straight parallel transverse lines across the middle of both wings, enclosing a median area somewhat dusted with violet-grey. Submarginal line on both wings strongly undulate, the distal margin dusted with violet-grey. 6 fine yellowish white dots on the hindwing and 4 or 5, somewhat finer still, on the fore-

stelligera. wing. From South Brazil (Parana). — **stelligera** *Btlr.* is a form of *quantius* in which the anterior white dot on the underside of the hindwing is somewhat larger. From Parana and Esperito Santo.

eusebia. **E. eusebia** *Btlr.* (47 g). Above olive-brown, with the distal margin darker. Beneath lighter in the marginal area. Of the median lines only the anterior half of the outer line is visible on the forewing, on the hindwing the inner median line is almost straight, the outer undulate. Before the apex of the forewing a white dot surrounded with dark. On the hindwing 5 or 6 similar eye-shaped dots. The submarginal line forms shallow lunules on the forewing, deeper ones on the hindwing. From Colombia (Bogotá), Antilles (coll. Bang-Haas).

boliviana. **E. boliviana** *Godm.* (47 g). Above olive-brown. Beneath the forewing is olive-brown, with the distal margin broadly ochre-yellow, proximally to which are placed 2 or 3 white subapical dots. An undulate submarginal line and 2 straight marginal lines brown. The hindwing is strongly dusted with white in the posterior half, the distal margin dull ochre-yellow, the base brown, 2 very dentate median and an undulate submarginal line dark brown. In the marginal area a row of fine white dots. Bolivia (San Jacinto, Corvica).

griseola. **E. griseola** *spec. nov.* (47 g). Above grey-brown, costal and distal margin darker, hindwing lighter, marginal lines indistinct. Under surface yellowish grey, in the marginal area lighter, the first transverse line indistinct, the second more strongly dentate on the hindwing than on the forewing, the submarginal line dentate on both wings, the marginal lines on the forewing straight, on the hindwing undulate. In the marginal area on the forewing 5 brown spots, the 3 middle ones with silvery pupils, hindwing with 5 ocelli with silvery pupils and ochre-yellow and brown rings. From the Mapiri.

griseldis. **E. griseldis** *spec. nov.* (48 d) ♀. The distal margin of the hindwing is strongly dentate, the inner margin excised. Above grey-brown, the distal half of the hindwing lighter. No first transverse line discernible. The 2nd transverse line is placed on both wings somewhat further distad than usual and is fairly straight. Submarginal line dentate, 2 marginal lines dark, a black dot in cellule 2 of the hindwing. Under surface yellow-grey, inner margin of the forewing and distal half of the hindwing lighter, finely sprinkled all over with brown, forewing with the same transverse lines as above, hindwing with a straight first transverse line, the 2nd transverse line widened into a broad brown band, in the light marginal area 3 black dots, in part with double white pupils and some brown spots between them. From Esperito Santo (Brazil).

muscosa. **E. muscosa** *Btlr.* (48 e) ♀ has the apex of the forewing truncate, so that an obtuse angle is formed in the distal margin at vein 5 and a right angle at the costal margin; in the ♀ figured this point is even somewhat produced. Hence the species forms a transition to the genus *Pindis.* Above unicolorous olive-brown. On the under surface the forewing is lighter brown and irrorated all over with dark brown. The ground-colour of the hindwing is more bluish grey, likewise irrorated with brown, bearing in the middle a blue-grey spot with less irroration, behind this a broad blue-grey band without any; but in the ♀ this band is also irrorated. — According to W. Müller the egg of this species is round, without markings. The young larva resembles that of *Taygetis ypthima.* The body is whitish green, adorned with fine bristly hairs, the head light brown, rugose, with conical elevations, on which are placed short black-brown horns with bristly hairs. The larvae feed on grasses, but died before the first moult. The butterfly is distributed in South Brazil (Blumenau, Joinville, São Paulo).

antonoë. **E. antonoë** *Cr.* (48 e). One of the largest species. Above brown with 2 dark marginal lines on the forewing and 3 on the hindwing, also a small, black, oval spot in cellule 2 of the hindwing. Beneath lighter brown, with 2 almost straight brown median stripes, 3 eye-spots on the forewing, only the first distinct, 5 on the hindwing, the 2nd and 5th large, the others smaller, all in red-yellow rings. From Guatemala, Honduras, Nicaragua, Panama, Venezuela, Surinam, Amazons. — *zeba.* **zeba** *Btlr.* is a form of *antonoë* with the under surface lighter brownish grey, the median bands somewhat narrower and converging somewhat towards the anal margin of the hindwing. From Pebas in Peru.

sabina. **E. sabina** *Fldr.* (48 e) is somewhat similar to *antonoë Cr.*, but considerably smaller. The upper surface is grey-brown with 3 faint transverse stripes, which are broader on the hindwing, a large black eye-spot with yellow and brown rings in cellule 2 of the hindwing before the anal angle and 2 similar, somewhat obscure eye-spots at the apex of the same wing; the other 2 eye-spots of the underside only show through quite faintly above, the under surface is lighter, with one ocellus on the forewing and 5 on the hindwing. From the Amazons and Cayenne. The figure is from Felder's type in coll. Rothschild.

lineata. **E. lineata** *Godm.* (45 e). The hindwing of this species is more elongate than in *antonoë*, with the anal half of the distal margin dentate. The upper surface is unicolorous brown, the under surface somewhat lighter brown, with a straight, yellowish white, sharply defined median band 1 mm. in breadth and a narrow, brown, white-edged basal line. On the broad distal margin, which is much lighter, the dentate submarginal line and the marginal line stand out distinctly. Each wing bears 2 or 3 small, black, white-pupilled eye-spots. The median band varies greatly in shape, width and colouring. From Manaure in the Sierra Nevada, from Santa Marta (900 m.) in North Colombia, Carmen (1200 m.) in West Columbia, in August. — I propose the name *interrupta.* **interrupta** *form. nov.* for a form in which the median band on the underside of the forewing is only indicated at the costal margin by a pointed white triangle, being otherwise replaced by a dark brown line, accompanied distally in places with white scales. On the hindwing it is interrupted several times, only remaining visible, as a fine, white transverse line, at the costal margin, in the middle of the wing and before the anal angle. On the other hand the first transverse line (that nearest to the base) is on both wings distinctly white and distally margined *melania.* with brown. — **melania** *form. nov.* differs still more. In it the white median band has disappeared entirely and in its place a black line runs through the deep dark brown ground-colour. The basal transverse band is also much darkened, so that it is inconspicuous. The eye-spots and the broad, light marginal band, however, are as in the type-form. Both forms were found by FASSL at Carmen in West Colombia, *interrupta* at 1600 m. in December, *melania* at 1200 m. in October.

satyrina. **E. satyrina** *Bates* (= Tayg. cecilia *Bdv.*) (48 e). Above brown with a black, white-pupilled, sometimes very indistinct eye-spot at the anal angle of the hindwing. Beneath likewise brown with 2 parallel, nearly straight, dark brown transverse stripes crossing the middle of both wings, the inner one distally, the outer one proximally bordered with ochre-yellow. The distal margin of the forewing is rather broad, lighter reddish brown, and shows before the apex a small black, white-pupilled ocellus. The hindwing has anteriorly two and posteriorly one similar but larger ocellus. The species is very variable. From Guatemala, Costa Rica, Panama *incerta.* and Mexico. — **incerta** *Btlr.* is a form of *satyrina* which differs in the lighter brown ground-colour of the under surface and has 5 eye-spots on the hindwing beneath. Occasionally the 3rd and 4th of these eye-spots are small, but all have distinct white pupils. There are further 2 white dots on the forewing. Occasionally also the ochre-yellow bordering of the brown median stripes is absent. A ♀ of this form has on the upperside of the forewing a reddish yellow-brown band, differing somewhat from the ground-colour, and on the underside of the hindwing only two eye-spots in cellules 2 and 5. Between these are placed in cellules 3 and 4 three small *gigas.* white spots. From Costa Rica. — **gigas** *Btlr.* (48 e) is a rather large form of *satyrina*, in which the forewing has 3 ocelli on the under surface (one larger and 2 smaller) and the hindwing five large ones, the first, second and last black, with yellow iris and white pupil; the third and fourth are brown with white pupil. From Mexico.

tiessa. **E. tiessa** *Hew.* Size of the preceding. Above dark brown with black submarginal line. The hindwing is dentate and has in the anal angle an indistinct eye-spot with brick-red ring. The under surface (according to HEWITSON) is brown from the base to the middle. Both wings are traversed before the middle by a red-brown band, and at the middle by a broader band of the same colour. Then follows a broad grey band, on which is placed a brown stripe with the eye-spots; these consist of a small one near the costa of the forewing and 3 on the hindwing, namely 2 at the apex and 1 at the anal angle. All the eye-spots are black with reddish iris, dark brown ring and white pupil. 2 submarginal stripes and the margin red-brown. The stripe on the hindwing is dentate like the margin. — The figure in BUTLER Lepid. Exot. pl. 18 fig. 4 does not agree with this description of HEWITSON's as regards the ground-colour of the wings and the colouring of the eye-spots. According to this figure the ground-colour of both wings is light reddish grey or flesh-coloured all over with a lilac band beyond the middle, whilst HEWITSON says the basal half of the wings is brown and the band grey. The iris of the eye-spots according to BUTLER is light yellow, HEWITSON calls it rufous. GODMAN and SALVIN describe the species with 5 eye-spots on the hindwing, of which 2 are indistinct. From Nicaragua, Costa Rica, Panama and Ecuador.

libye. **E. libye** *L.* (= harpyia *Fldr.*) (48 e). Above olive-brown with two dark brown marginal lines and one submarginal line, beneath much lighter, more or less inclining to lilac, with 2 straight, rust-brown stripes, one before, the other in the middle; the former crosses the cell on both wings, the latter on the forewing only touches its posterior angle, on the hindwing it enters the cell at the point of origin of vein 5 and leaves it between that of vein 2 and that of vein 3. Before the apex of the forewing a small round ocellus, 5 oval ocelli on the hindwing, of which the 1st, 2nd and 5th are black with very indistinct pupils and yellow ring, thickened at the proximal side, the rest indistinct. *libye* is a common and widely distributed species. Guatemala, Honduras, Nicaragua, Costa Rica, Panama, Colombia, Ecuador, Surinam, Brazil (Pará, Pernambuco, Bahia, Rio), Jamaica. *libyoidea.* — **libyoidea** *Btlr.*, is a form of *libye*, somewhat larger, with the forewing more produced at the apex and the hindwing less strongly dentate. On the under surface are placed on the forewing four distinct black-brown eye-spots with yellow rings and with white pupils formed of irregular white dusting, the ocelli of the hindwing are much larger than in the type-form, the largest, in cellule 2, measures 6 mm. in length and 4 mm. in breadth. In the course of the 2nd (outer) median stripe I notice another difference from *libye*, which BUTLER has not mentioned. In the figure of *libyoidea* in the Proc. Zool. Soc. Lond. 1867 pl. 11 fig. 13 this stripe intersects the lower angle of the cell on the forewing, whilst in *libye* it only touches it. On the hindwing it enters the cell between the points of origin of veins 4 and 5, thus on the lower discocellular, and leaves it between veins 3 and 4, whilst in *libye*, as mentioned above, it enters the cell at the origin of vein 5 and leaves it between veins 2 and 3. *gracilis.* From Nicaragua. — **gracilis** *form. nov.* (48 f) is a further form of *libye*, differing chiefly in having the two straight, reddish brown median stripes on the under surface of both wings placed more distally. On the forewing the 2nd, outer stripe is situate at a distance of 2 mm. from the cell. On the hindwing it crosses the lower discocellular as it enters the cell and the median at the origin of vein 3 as it leaves it, and is thus placed somewhat further distad than even in *libyoidea*. In consequence of this *gracilis* has the marginal area much narrower. On the forewing there is only one eye-spot, the 5 eye-spots of the hindwing are smaller, less oval, but coloured like those of *libye*. From Pebas in Peru. Coll. Bang-Haas.

Pacarus Group.

saundersii.

E. saundersii *Btlr.* The inner angle of the forewing with a bluntly angled projection. Above brown with 2 indistinct marginal lines. Beneath lighter brown, inclining to violet, the marginal area of the hindwing bluish green. Two brown median lines, diverging towards the costa of the forewing, the outer forming a small angle distad on the hindwing. Two brown marginal lines, forewing without eye-spots. On the hindwing 5 (occasionally 6) oval black eye-spots with light brown and outer dark brown rings and silvery pupils. The 3 middle ones are somewhat larger than the rest. Size 56 mm. From Ega on the Amazon and from Pernambuco.

mima.

E. mima *Btlr.* Similar to the preceding, but much smaller, only measuring 37 mm. On the under surface the forewing has a small eye-spot before the apex and the median lines are more approximated anteriorly; the hindwing is less violet and its eye-spots are smaller and placed nearer to the margin. From Tapajos.

fumata.

E. fumata *Btlr.* Above black-brown, with light brown marginal line. Beneath somewhat lighter; on the forewing only one median line is present, which touches neither the costal nor the inner margin; on the hindwing there are two, of which the outer one is angled at the anal angle and joins the undulate submarginal line. In addition there are 2 dark brown marginal lines. Hindwing with 6 heart-shaped black ocelli, which have ochre-yellow rings and outer dark brown ones and are sprinkled with steel-blue dots, the 3rd, 4th and 5th ocelli somewhat larger than the rest. 55 mm. From Rio Grande.

amalda.

E. amalda *spec. nov.* (48 f). This new species is similar to *fumata* beneath, but very different above and considerably smaller. The basal and median areas of the forewing above are velvety dark brown, the costal and distal margins lighter brown. This lighter colouring begins narrowly at the base of the costal margin, but gradually increases in breadth distally and measures 4 mm. from the apex to the inner angle, where it again becomes somewhat narrower. At the base the two colours shade into one another. The hindwing is lighter brown. The under surface is dark grey-brown with 2 median, one submarginal and 2 marginal lines brown. The forewing has no eye-spots, but on the hindwing there are 5 small, proximally pointed, black ocelli, which are surrounded by brown rings and have obliquely placed pupils formed of silvery dusting. From the Mapiri (Amazons), coll. Bang-Haas.

pacarus.

E. pacarus *Godt.* Above unicolorous brown. Beneath the same with 2 darker marginal lines, the hindwing in addition with a dark brown median line and 5 round, deep black ocelli, which have a pupil composed of silvery dusting, a brownish iris and outside it a dark brown ring. On the forewing there are no eye-spots. 50 mm. From Brazil. Rare, apparently wanting in all the more recent collections.

peculiaris.

E. peculiaris *Btlr.* Above brown with a lighter line before the margin and a black-brown marginal one, the hindwing with a dentate submarginal. Beneath lighter, both wings with 2 dark brown marginal, a dentate submarginal and 2 irregular median lines. A washed-out light brown band crosses the middle. The hindwing has before the apex at the costal margin 2 obliquely placed, black, white-pupilled ocelli with ochre-yellow iris. The species is easy to recognize by these 2 isolated eye-spots on the under surface. 53 mm. From Minas Geraes. Rare.

insignis.

E. insignis *Btlr.* Above brown with 2 indistinct marginal lines, on the hindwing the larger eye-spot of the under surface before the anal angle shows through above. Beneath the wings are lighter, the hindwing whitish in the median area; both wings with 2 brown marginal lines, the inner on the hindwing undulate. The hindwing with 2 fairly straight, parallel brown lines, only 3 mm. apart, through the middle and in the marginal area, in cellules 1 c, 2 and 3, with 3 black, silver-pupilled eye-spots, which have a common ochre-yellow bordering and of which the middle one is large, the others very small. Locality unknown. Collected by Bates.

erichtho.

E. erichtho *Btlr.* (= antonina *Fldr.*) (48 f). The inner angle of the hindwing is obtusely produced as in *saundersii*. Upper surface olive-brown, the forewing with 2, the hindwing with 3 dark brown marginal lines. Beneath lighter brown; the margins dusted with whitish violet, with 3 distinct marginal and 2 dark brown median lines, and with a short dark brown streak on the discocellular of the forewing. Two small eye-spots before the apex of the forewing, occasionally also a third in cellule 2; hindwing with 6 black eye-spots with thick, glossy white pupils, which are surrounded by 4 rings, first a brownish yellow, then a black, then ochre-yellow and outside again black. The 3rd, 4th and 5th eye-spots are usually larger than the rest. From Cayenne, Surinam, Brazil (Rio, Pernambuco, Bahia, Pará, Ega), Bolivia (Coroico).

Batesii Group.

batesii.

E. batesii *Btlr.* (= terentia *Fldr.*) (48 g). Above brown, with a slight lilac gloss, with 3 indistinct marginal lines and grey fringes. The ♀ at the anal angle of the hindwing with a black oval spot with white pupil and a light brownish ring. Beneath light lilac with 2 red-brown median and a short, oblique basal stripe, a similar band in the marginal area, on which the eye-spots are placed, and 3 marginal lines. On the forewing a black eye-spot before the apex, with ochre-yellow ring and glossy white pupil, and some silver dots below it. Hindwing with 5 ocelli or eye-shaped spots, of which the 1st, 2nd and 5th resemble the eye-spot on the forewing, but the 2nd and especially the 5th are much larger, whilst the 3rd and 4th are composed only of silver spots with red-brown bordering. From Surinam and the Tapajos. In the Surinam examples the inner margin of the forewing is somewhat ochre-yellow on the under surface. — *analis.* **analis** *Godm.* (48 f) is a form of *batesii* with a slight purple suffusion above and a distinct spot of dark blue scales at the anal angle of the hindwing. The red-brown bands on the under surface are broader and show through above; otherwise not different from *batesii.* From São Paulo and the Tapajos (Amazon) and from Pebas in Peru. — *tersa.* The form **tersa** *Stgr. i. l.* (49 a) is quite similar to *batesii* on the upper surface, but on the underside, instead of the 2 or 3 silver spots which *batesii* and *analis* have between the eye-spots of the hindwing, bears 2 further small brown eye-spots with grey pupil, yellow iris and dark brown outer ring. In addition there is also a quite small, but otherwise similar black ocellus at the anal angle of the hindwing, so that there are 6 eye-spots altogether on this wing. Locality unknown. Coll. Bang-Haas. — *thalessa.* **thalessa** *Möschl.* is according to its author's figure a form of *batesii* which only differs in having a small black eye-spot with white pupil, placed in cellule 3 on the hindwing between the two large eye-spots. But in the corresponding description the eye-spot is not mentioned, the cellule in question, on the contrary, being described as without eye-spot. From Surinam.

juani. **E. juani** *Stgr.* (49 a). Above dark brown-grey, with only the anal eye-spot of the hindwing showing through somewhat above. The under surface is similar to that of *batesii*, but the ground-colour in the basal part to the 2nd transverse stripe is much darker, brownish grey. The whitish grey ground-colour is confined to the distal half of the wings. The 2 dark brown median stripes are broad, straight and parallel. The submarginal line is rather broad, not dentate but almost straight. On the broad brown band in the marginal area are placed on the forewing one eye-spot, on the hindwing 5 black ocelli, of which the 5th is very large and with single white pupil, the 1st and 2nd small with double pupil, whilst the 3rd and 4th bear in the middle oblong silver streaks. All are margined with ochre-yellow. From the Rio San Juan in West Colombia.

tricolor. **E. tricolor** *Hew.* (49 a). One of the most beautiful species of the genus. Above the forewing is brown, the costal margin reddish brown; a glossy blue line runs parallel with the posterior part of the distal margin. The hindwing is black-brown with a broad red-yellow costal margin and a glossy blue stripe along the inner margin and the posterior part of the distal margin. Beneath light violet-grey with 2 broad brown median stripes, a narrow oblique stripe at the base of both wings, a broad vague band in the marginal area, on which the eye-spots are placed, and 3 smooth marginal lines running parallel with the distal margin. On the forewing one eye-spot before the apex, on the hindwing 3, as in *batesii,* in cellules 2, 5 and 6, but the first very large and all with double pupils and between them in cellules 3 and 4 several elongate silver streaks placed in 2 oval brown spots bordered with red-yellow. From Fonteboa, Tapajos (Amazons). — *fulgora.* The form **fulgora** *Btlr.* (49 a) is distinguished by a bright iridescent blue stripe, which on the upper surface of the forewing extends from the base across the cell, widens before the apex in all the cellules and is then continued as a narrow line along the distal margin to the inner angle. From Pebas in Peru and from Coca in Ecuador.

nortia. **E. nortia** *Hew.* (49 a). ♂ above yellowish white with the costal margin of the forewing and the distal margin of both wings brown, the brown bands of the under surface also showing through above. Under surface white, with 2 broad, parallel, brown median stripes and in the marginal area a broad brown band, which on the forewing contains no eye-spots. On the hindwing instead of this band 2 small eye-spots at the apex, 2 at the anal angle (one very large), all black with white pupils and red-yellow and brown rings and between those in cellules 3 and 4 two lead-coloured longitudinal streaks in red-yellow and brown oval spots. At the distal margin 3 brown marginal lines, which on the hindwing are somewhat undulate. The ♀ is grey-brown above, towards the distal margin darker, the median stripes of the under surface show through above. Beneath the markings are similar to those of the ♂, but the basal and median areas are finely dusted with brown as far as the 2nd (somewhat basally curved) median band, so that only the distal part retains the light ground-colour. The ocelli and silver spots, however, are as in the ♂. From Pebas (Peru), the Tapajos (Amazons) and Cayenne. *nobilis.* **nobilis** *form. nov.* (49 a) is a second ♀-form of *nortia,* in which the distal half of the forewing above is light whitish grey and the basal half, the whole costal margin and 2 marginal lines brown. The light colouring is continued also on the hindwing at the apex for a short distance, but then gradually shades into the brown ground-colour. On the under surface the 2nd brown median stripe is not curved but straight and the light band beside it considerably narrower. The eye-spots are as in the type-form. From Tabatinga on the Amazon. *moderata.* **moderata** *form. nov.* (48 g) is another female form of *nortia,* in which the light band on the under surface is likewise quite straight on both wings behind the middle. But the upper surface of both wings is entirely brown, as in the ♀ of the type-form, and has 3 dark brown marginal lines. From the Mapiri (Bolivia).

segesta. **E. segesta** *spec. nov.* (51 b). ♂. The upper surface is unicolorous brown with 3 brown marginal lines, which on the forewing are indistinct. The under surface is similar to the ♀♀ of *E. nortia,* but distinguished by the different position of the white median band. This band on both wings is placed *between* the two brown bands, whilst in *nortia* ♀ it is placed distally to the second brown band. Hence the marginal area is broader than the basal, especially on the hindwing. The brown bands are broader than in *nortia* ♀, but the eye-spots quite as in that form, the oval ochre-yellow spots, however, each with a glossy silver streak in the middle, stand out distinctly between the eye-spots. Only the ♂ has yet been found. From Gramal near Muzo in Colombia (Fassl).

lesbia. **E. lesbia** *Stgr.* Above light brownish grey with 3 straight brown transverse stripes on the forewing and 2 on the hindwing and 3 brown marginal lines. Hindwing with black anal eye-spot with double white pupil and broad ochre-yellow ring; before this an elongate white spot and towards the apex 3 round black spots, of which the middle one is the largest. The under surface is almost the same, except that a small eye-spot is placed before the apex of the forewing and a few silver spots below it; there is also a large ochre-yellow spot proximally to the anal ocellus on the hindwing and at the apex of this wing a second eye-spot instead of the black spot, while the white longitudinal streak on the upper surface is absent. 41 mm. From the Amazons (Massauary, Teffé, Fonteboa).

Gera Group.

gera. **E. gera** *Hew.* Above dirty white, forewing at the costal and distal margins broadly brown, hindwing bearing before the middle 2 brown lines and before the margin 2 indistinct eye-spots with dark central dots, both wings with 2 brown marginal lines. The under surface is as above, only the forewing also has 2 brown lines before the middle, the eye-spots of the hindwing are reddish, have black dots with white pupils, distally to them are placed 2 further smaller eye-spots and between them 2 oval spots with a silver line in the middle. The ♀ is above brown, at the base purple with a white band traversing the middle from the costal margin of the forewing to the hindmargin of the hindwing. The under surface is grey-brown with the same white band. The eye-spots as in the ♂. From the Amazons.

metagera. **E. metagera** *Btlr.* Above brown, in the middle whitish, with 2 indistinct brown median bands and 3 dark brown marginal lines. Hindwing with a dark spot at the apex and an eye-shaped spot at the anal angle. Wings beneath lighter, towards the apex rose-reddish, bands as above, but more distinct. Hindwing with 6 yellow-bordered eye-spots, of which the 2 middle ones are oval and have oval silvery dots, the others round, black and with small silvery pupils. From the Upper Amazon.

hiemalis. **E. hiemalis** *Btlr.* Above white, costa and margin of the forewing brown, both wings with 3 brown marginal lines, hindwing with 2 brown spots at the apex and one at the anal angle. Beneath likewise white with 2 brown median lines, which are abbreviated on the forewing, and of which the distal one is angled before the inner margin of the hindwing. Costal margin and apex of the forewing brown, 3 marginal lines as above, hindwing with 6 ocelli, some round, others oval, just as in *metagera* except that they are margined with red-yellow. From the Amazon and its tributary the Rio Negro.

julia. **E. julia** *Stgr. i. l.* (48 g). Above dark olive-brown with 2 indistinct marginal lines on the hindwing. Beneath likewise olive-brown with a straight white median stripe, which extends from ½ the costal margin of the forewing to the anal angle of the hindwing, and with 3 brown marginal lines on the somewhat lighter distal margin, the inner one undulate. Forewing before the apex with a small black eye-spot with red-yellow ring and white pupil, hindwing with 5 ocelli, the 1st, 2nd and 5th coloured like the one on the forewing, but (except the first) larger. The others are brown with 2 short white streaks in the middle. In the ♀ the ground-colour is somewhat lighter brown, otherwise it is like the ♂. From the Songo in Bolivia and Cuzco in Peru at elevations of 2—3000 m. — **torva** *form. nov.* (48 g) is a form of *julia*, differing in having the median band on the under surface not white, but strongly dusted with grey-brown and before the anal angle of the hindwing bent basewards in an acute angle. Found by Fassl in October at the Quindiu-Pass in Colombia at 2500 m. *torva.*

Cluena Group.

cluena. **E. cluena** *Drury* (= clueria *F.*) (48 g). Above violet-grey, distally darker with 3 dark brown marginal lines, hindwing with a continuous row of 5 dark brown spots, of which the posterior 4 have lilac spots in the middle. Beneath entirely lilac with very fine brown median and marginal lines. In the marginal area a nebulous brown band, on which on the forewing are placed 2 or 3, on the hindwing 5 small ocelli, the 1st on the forewing, the 1st, 2nd and 3rd on the hindwing black, the others brown, all with ochre-yellow ring and white pupil. From Brazil (Rio de Janeiro, Esperito Santo).

Byses Group.

byses. **E. byses** *Godt.* (49 d). Above in the ♂ brown with slight bluish violet reflection, otherwise without markings. Beneath lilac, finely striated with brown all over. At the distal margin this striation is gradually condensed into an entirely brown colouring. Close to the distal margin are placed on the hindwing in cellules 2 and 5 two small black eye-spots with white pupil and yellow ring; between and before these 3 white dots. Before the apex of the forewing 3—4 white dots. The ♀ is above unicolorous brown without blue reflection, the eye-spots on the underside of the hindwing, however, are much larger than in the ♂, and there is further a quite small eye-spot before the apex of the forewing beneath. The size of the eye-spots varies greatly. From Brazil.

Lea Group.

lea. **E. lea** *Cr.* (48 f). Above glossy blue, apex, costal and distal margins of the forewing and the greater part of the veins black. Beneath brownish grey, the posterior half of the hindwing in the ♂ glossy blue, in the ♀ more blue-grey. Both wings with 2 nearly straight, parallel dark brown median stripes, of which the proximal on the forewing does not reach the costal and inner margins, and with 3 marginal lines. Forewing with 2 small eye-spots before the apex, hindwing with 6 black eye-spots, each with white pupil and surrounded by an ochre-yellow ring and outside it a brown one, only the 2nd and 5th large, the others very small. From Surinam. — *junia.* **junia** *Cr.* is a form of *lea* with the upper surface entirely sky-blue and only bordered by a narrow black marginal line. On the under surface of the forewing only one eye-spot is present. The ♀ has the margins of both wings brown. From Surinam and Brazil (Parâ and Bahia). — *philippa.* **philippa** *Btlr.* is a form belonging here, in which the upper surface is entirely brown and only the hindwing is blue-grey in the ♂ towards the apex and in the ♀ towards the base. There are also 2 indistinct brown marginal lines, which are undulate towards the apex of the forewing and on the hindwing. The under surface is exactly as in *junia.* The antennae are above brown, beneath rust-coloured, towards the tip ringed with black, the tip itself white. From Ega.

Cephus Group.

cephus. **E. cephus** *F.* (♂ = lysidice *Cr.*, ♀ = doris *Cr.*) (49 b). The ♂ is above glossy sky-blue. Forewing with the costal and distal margins blackish grey; a stripe of the same colour runs from the base over the median and is divided on the branches of this vein; all the veins are blackish grey at the distal margin. On the hindwing all the margins are the same, only the inner margin somewhat lighter. The under surface is likewise sky-blue with brown transverse stripes and marginal lines, one eye-spot on the forewing and 4 on the hindwing. The ♀ is above unicolorous grey-brown, with bluish white terminal line at the margin of the hindwing. The under surface is quite similar to the ♂, except that the eye-spots are larger. This beautiful species is widely distributed in South America; it occurs in almost the whole of the Amazon country; further in Surinam, Colombia and South Brazil (Rio de Janeiro). — *angelica.* **angelica** *Btlr.* is a form of *cephus* which only differs in its larger size (48 mm.), in having an undulate, inner marginal line on the under surface and in the transverse stripes on the forewing only reaching to the middle. From Rio de Janeiro.

parthenie. **E. parthenie** *spec. nov.* (48 f). Above bluish grey-brown with 2 dark brown marginal lines, between which on the hindwing is placed a whitish line, otherwise without markings. Beneath light bluish grey with 2 narrow median stripes, a fine submarginal line and 2 fine marginal lines. The outer of the median stripes is somewhat proximally curved on the forewing, hence the marginal area is broader than usual. Forewing with 1 eye-spot, hindwing with 6, of which the 2 middle ones are indistinct, the 1st and last small, the other 2 somewhat larger. (38 mm.). From Minas Geraes. Of this species I received a female from the Thieme collection, determined as *angelica* ♀; but as it is much smaller than *angelica* ♂ and the colouring and pattern are quite different from *cephus*, I regard it as a separate species.

glaucina. **E. glaucina** *Bates* (49 b). Above pale blue-grey, not glossy, forewing grey-brown at the apex and the costal and distal margins, veins on both wings and the 3 marginal lines of the hindwing likewise grey-brown. Beneath pale blue with 4 brown lines before and behind the middle and 2 marginal lines. Forewing with one, hindwing with 4 ocelli as in *cephus.* The ♀ is unicolorous brown above. Rather widely distributed in Mexico and Guatemala from the lowlands up to 1500 m. — *glauca.* **glauca** *Stgr. i. l.* (49 b) is a more restrictive form of *glaucina*, in which the forewing is almost entirely dusted with grey-brown and the blue colouring is only present near the inner margin. An elongate, more thinly scaled spot is placed at the middle of the inner margin. The hindwing is somewhat brighter blue than in *glaucina*, with black costal margin and 3 black marginal lines. The under surface is likewise similiar to *glaucina*, but has 5 eye-spots on the hindwing in cellules 2—6, the two in cellules 2 and 5 larger, black with 1 bluish white and 1 brown ring, without pupils, the others small, indistinct, consisting of a brown ring, which is filled up with the blue ground-colour and has a brown central dot. The eye-spot in cellule 1 c of the hindwing is thus absent here. From Bolivia.

brixius. **E. brixius** *Godt.* Above bluish grey with 6 dark brown transverse stripes and 2 marginal lines. Beneath the ground-colour is lighter, the stripes as above; on the 4th stripe of the hindwing are placed 5 eye-spots, of which the 1st, 2nd and last have white iris, but the other two are without iris. All these eye-spots are black with double silvery pupils. 38 mm. From Brazil. — *brixiola.* **brixiola** *Btlr.* is a somewhat smaller form of *brixius*, which according to Butler's description has one less transverse stripe on the wings. The ♂ is above light grey, the ♀ light brown, on the 4th stripe the hindwing has 2 indistinct black eye-spots with white pupils. The under surface is bluish white, with the stripes as above. Before the apex of the forewing in the ♀ a black, yellow-ringed eye-spot with silvery double pupil and 2 indistinct eye-spots below it (in the ♂ these are all obsolescent). On the hindwing five similar ocelli, always distinct, of which the 2nd and 5th are larger, only the 3rd and 4th entirely silvery and with yellow rings. 35 mm. From Parâ.

aegrota. **E. aegrota** *Btlr.* (49 b). Above bright blue; forewing with black margin and two black median stripes; hindwing with narrow margin and oval spot at the anal angle. Fringes white. The under surface is similar to that of *cephus* and *glaucina*, but the submarginal line is more dentate, the eye-spots in cellules 2 and 5 of the hindwing larger, the one in cellule 1 c absent, on the other hand in cellules 3 and 4 are placed between the eye-spots two brown rings with blue centres and on the forewing in cellules 3 and 4 likewise two similar brown rings with blue centres and brown central dots. From Pará and from the upper Madre de Dios in Peru.

aetherialis. **E. aetherialis** *Btlr.* above approaches *aegrota*, but is very different beneath, and the distal margin of the forewing is not rounded, but nearly straight. The ground-colour of the upper surface is of the same blue as in *aegrota*, the inner of the median lines is indistinct and the black anal spot of the hindwing is smaller. Beneath the wings are silvery blue with 2 narrow rust-red median lines, which are angled before the inner margin of the forewing, a submarginal line of the same colour and 2 dark brown marginal lines. Forewing with 3 small eye-spots in cellules 4—6, the anterior one with yellow iris, the other 2 indistinct; hindwing with 5 eye-spots, of which the first 2 and the 5th are black, while all have yellow rings and white pupils, the pupils of the 2nd and 5th being double. 40 mm. From Sarayacu, Ecuador.

coelestis. **E. coelestis** *Btlr.* (48 g). Above blue, apex and costal and distal margins of the forewing broadly dark brown with two abbreviated median stripes, hindwing with 2 marginal lines and a submarginal likewise dark brown. Beneath blue, 2 median stripes, a somewhat abbreviated band on the forewing in the marginal area, a submarginal line and two marginal lines brown. On the forewing 2 eye-spots before the apex, black with blue and outer brown ring, the lower one only small; hindwing with 5 similarly coloured eye-spots in cellules 2—6, the 2nd and 5th large, the others all small. The ♀ is somewhat larger (47 mm), and has the costal margin of the hindwing above rather broadly dark brown and at the anal angle a dot of the same colour. From the Amazons (Ega) and the Mapiri. *mare.* — **mare** *Btlr.* is a smaller form, in which the median stripes on the upper surface are almost entirely obsolete and on the under surface the eye-spots are smaller and in part indistinct, the bands also narrower and faint. From Pará.

caerulea. **E. caerulea** *Btlr.* (49 b), similar to *coelestis*, above glossy blue. Apex and distal margin of the forewing broadly dark brown, the costal margin narrowly dark brown along the costal vein. On the hindwing the apex and 2 fine marginal lines are dark brown. The under surface is light glossy blue with 5 nearly straight brown transverse lines and fine marginal lines, only the 2 distal lines on the hindwing undulate. At the distal side of the 3rd transverse line are placed on the forewing an eye-spot before the apex, on the hindwing 3 eye-spots, namely 2 at the apex, one at the anal angle. These eye-spots are black with blue ring and outer brown ring. The ♀ is somewhat larger and has above on the forewing 2 brown median stripes and on the hindwing a brown anal spot. From Maranhao (Brazil) and the Mapiri (Bolivia).

ziza. **E. ziza** *Btlr.* is similar to *coelestis*, but somewhat smaller, and the brown ground-colour has a violet tone. The 2 median bands of the forewing are placed nearer together, are parallel and reach the inner margin; the marginal band is somewhat narrower. The hindwing in addition to the 2 marginal lines has also a median line. Beneath light blue with 2 brown median bands, 2 marginal lines and an eye-spot on the forewing, as well as 5 ocelli on the hindwing, all black with white rings, but the 3rd and 4th indistinct. From Pebas in Peru.

urania. **E. urania** *Btlr.* is likewise allied to *coelestis*, and of the same size. Above glossy greenish blue with very broad brown distal margin, the costa and a streak behind the cell likewise brown. Hindwing with 2 brown marginal lines. Beneath with 4 transverse lines across the middle and before the margin; further with 2 marginal lines, all brown. Apex of the forewing and anal angle of the hindwing likewise brownish. Forewing with an indistinct black eye-spot before the apex. On the hindwing only the 2 larger eye-spots are distinct. From Cametá near Pará.

coelica. **E. coelica** *Hew.* Above sky-blue, apex and distal margin broadly black; on the hindwing a band at the apex, two submarginal lines and the fringes black. Beneath likewise sky-blue, both wings with 2 stripes before the middle, 2 submarginal lines and the fringes dark brown. Before the apex of the forewing a black eye-spot bordered with brown. At the apex of the hindwing 2 similar eye-spots (the first smaller), and at the anal angle a third eye-spot. Between them 2 brown flexuose rings. From Ecuador. Hewitson remarks that this species surpasses in beauty all the allied blue species; but the following *divina* is no less beautiful.

divina. **E. divina** *Stgr. i. l.* (49 c) ♂. Quite similar above to the preceding species; bright sky-blue with the apex and distal margin of the forewing broadly black, apex and 2 marginal lines of hindwing black. But the under surface differs in the larger number of the ocelli and of the median stripes. On the forewing before the apex two black eye-spots with light blue and outer brown ring and one or 2 brown spots posteriorly to them. On the hindwing 5 large, similarly coloured eye-spots in a straight row. The outer brown rings touch on the veins and on the proximal side of the eye-spots a brown stripe runs from vein 2 to the costal margin, so that 3 median bands are present. Occasionally the anterior ocelli of the hindwing have blue central dots. From Bolivia.

lobelia. **E. lobelia** *Btlr.* ♂: above sky-blue, apex and distal margin of the forewing broadly black, the veins before the margin the same, also a streak on the discocellular and an almost triangular ring behind the cell. The hindwing has the apex and 2 marginal lines black. The inner angle is more strongly produced than in the allied species. Beneath blue, with a basal streak, 2 median lines, a discal line and 3 marginal lines, all black. Forewing with one, hindwing with 2 blind black eye-spots of unequal size at the apex. 45 mm. From Ecuador.

helios. **E. helios** *Stgr. i. l.* (49 c) ♂. Above similar to *mare Btlr.*, dark blue, at the costal margin somewhat lighter, forewing with a straight black stripe across the discocellular, reaching to the first median vein. Distal margin black for a breadth of 2 mm., increasing at apex to 5 mm. Hindwing black at the apex, with 3 black marginal lines. Under surface light blue with red-brown, black-edged transverse stripes and brown marginal lines. On the forewing in cellules 3 and 4 two round ochre-yellow spots and above them in cellule 5 a brown ring, which is filled up with ochre-yellow and has a brown dot in the middle. Hindwing with 5 ocelli, the 1st, 2nd and 5th black with white pupil, that of the 5th eye-spot double, all with ochre-yellow iris and outer brown ring; the 3rd and 4th consist only of a brown ring, filled up with ochre-yellow. From the Mapiri in Bolivia.

periboea. **E. periboea** *Godm. & Salv.* (49 c). The ground-colour of the upper surface is blue inclining to grey. Apex, costal and distal margins of the forewing are dark brown. The hindwing has 3 dark brown marginal lines. Beneath the wings are brown with 2 dark brown median lines, a dentate submarginal line and 2 marginal lines. In the marginal area of the hindwing are placed 5 eye-spots, on the forewing the number varies from 1 to 4, or they are here entirely absent. They are small, black, with white pupils and brownish yellow rings. An easily recognizable species. From Colombia (Manaure in the Sierra Nevada from Santa Marta [SIMONS] and in Paime near Muzo, 1000 m., in October [FASSL]).

Pilata Group.

The ♂♂ of this group are distinguished by an oval spot of raised or hair-like scales, placed at the middle of the inner margin on the upperside of the forewing.

cyanites. **E. cyanites** *Btlr.* (= stigmatica *Godm.*) (49 c). The ♂ is sky-blue above, almost like *coelestis*, with black stripes and bands, but with the inner line on the forewing absent, inner margin of forewing with a whitish, grey-scaled spot. Beneath the bands are more reddish and the eye-spots smaller than in *coelestis*, otherwise like the latter. Moreover *cyanites* is larger. The ♀, which I received from coll. THIEME as *stigmatica* ♀, is very different from the ♂. It is grey-brown above, with a very slight bluish reflection in the basal of half both wings, with 2 marginal lines on the forewing, 3 on the hindwing, of which only the outer one is distinct. Fringes grey. Under surface bluish grey, with 2 brown lines through the middle, the distal one somewhat undulate, a strongly dentate submarginal line and 2 marginal lines, the latter on the hindwing undulate, with one distinct and several (3 or 4) indistinct ocelli on the forewing and 6 eye-spots on the hindwing in cellules 1 b to 6, all black with white pupil, ochre-yellow ring and brownish bordering, the outer 2 smaller, the middle 2 rather indistinct. BUTLER gives Brazil as locality, GODMAN received *stigmatica* from Entre Rios in Argentina, HAENSCH took both sexes in Minas Geraes.

pilata **E. pilata** *Btlr.* (49 c). Above sky-blue. Forewing with dark brown apex, costal and distal margins the same and with grey-brown hair-pencil over the inner margin. Under surface bright, glossy blue with 2 straight brown median lines, 2 marginal lines and a somewhat stronger submarginal line. Forewing with an eye-spot before the apex, with 2 small black spots below it and a lighter one above it. Hindwing with 4 eye-spots, 2 at the apex and 2 at the anal angle, the first and last small. These eye-spots consist of a thick orange-yellow ring with obliquely placed black pupil and an outer brown ring. Between the eye-spots are placed 2 thin brown rings, filled up with the blue ground-colour. From Ega (Teffé) and Tabatinga on the Amazon.

tenera. **E. tenera** *Stgr. i. l.* (49 c). Above dark blue, forewing with broad, washed-out, black distal margin and black veins. At the middle of the inner margin a short dark brown hair-tuft. Hindwing with undulate dark marginal lines. Inner margin grey. Beneath light greenish blue with 2 straight brown median lines, a curved band in the marginal area and undulate marginal lines. Forewing with a small blind eye-spot before the apex and below it a short brown nebulous band. Hindwing with 5 eye-spots of uniform size; these are black with ochre-yellow and outer brown rings and white pupils, the 3rd and 5th bi-pupilled. From the Rio Juntas in Bolivia.

penicillata. **E. penicillata** *Godm.* ♂: above greenish blue with narrow brown margins and with a thick pencil of brown hairs over the inner margin of the forewing. Beneath greenish brown with 2 fairly straight median lines, an undulate submarginal and 2 marginal lines, all dark brown. Forewing with 3 ocelli, the first somewhat more distinct; hindwing with 5 eye-spots, the 2nd and last larger than the rest. The eye-spots are black with white pupils and yellow and outer brown rings. The ♀ is above unicolorous brown, beneath quite like the ♂, except that the ground-colour is light brown, towards the distal margin grey. (38 mm). From Tapajos (Amazons).

scopulata. **E. scopulata** (49 d). ♂: similar to the preceding species, with a similar hair-tuft on the forewing, but with the upper surface not blue, but brown with dark brown marginal lines and somewhat lighter fringes. Under surface grey, the stripes through the middle of the wings broader and red-brown, on the forewing 2 or 3 eye-spots present, on the hindwing 5, of which, as in *penicillata*, the first on the forewing and the 2nd and 5th on the hindwing are larger and more distinct than the rest. The latter is bi-pupilled. From the Mapiri in Bolivia and the Upper Amazon.

Arnaea Group.

arnaea. **E. arnaea** *F.* (= ebusa *Cr.*, aranea *F.*) (49 d). Above brown, the larger posterior half of the hindwing with bright blue reflection. In the ♀ this reflection extends over the whole hindwing and also occupies the inner margin of the forewing. The ♀ is further distinguished by having on the hindwing before the 2 marginal lines a dentate, dark brown submarginal line, which is wanting in the ♂. In addition the 2 dark brown median lines on the forewing are somewhat broader in the ♀. The light brown under surface has likewise a blue reflection in the ♂, but this is much weaker than above, occasionally, however, extending, beyond the 2nd median stripe, nearly to the costal margin of the forewing. In the ♀ the reflection on the under surface is less visible. Widely distributed and rather common. Nicaragua, Costa Rica, Panama, Guiana, Colombia, Amazons. — Godman and Salvin (in Biol. Centr. Americana I, p. 89) question the correctness of employing the name *arnaea* for this species and consider that of *ebusa Cr.* more correct, as Fabricius himself in his Species Insectorum Vol. II, p. 75 has cited *Euptychia lea Cr.* (with a ?, however). But as *lea* has both wings blue above, while Fabricius only speaks of blue hindwing and describes the forewing as brown, I am of the opinion that Kirby and Butler are right in employing the name *arnaea* for *ebusa Cr.*

sericella. **E. sericella** *Bat.* ♀ similar to the preceding, but both wings above blue. Apex and distal margin of the forewing broadly dark brown, the costal margin narrow, with 2 fine brown median lines. The hindwing has brown fringes and 2 brown marginal lines with a reddish line between them. The under surface is according to Bates tawny brown with 2 dark brown median lines, the outer somewhat thicker and distally bordered by a straight, light lilac stripe; at the distal margin 2 dark brown median lines. Before 3 or 4 eye-spots on the forewing and 5 on the hindwing. Of the latter the 2nd and last are black with white pupil and yellow iris, the rest white with yellow iris. But the figure in the Biologia Centrali-americana does not agree with this description of Bates' in two points. The ground-colour in the figure is not tawny brown but dark brown, so that the transverse lines can scarcely be seen, and the difference in the colouring of the eye-spots mentioned by Bates is not discernible. As the species is represented in but few collections and is not known to me in nature, I cannot decide whether figure or description is correct. Very rare in Mexico (Orizaba) and in Guatemala (Vera Paz and Choctum).

chloris. **E. chloris** *Cr.* (= chlorimene *Hbn.*, tolumnia ♀ *Godt.*) (49 e). The wings of this species are very thinly scaled, hence the markings of the under surface show through above. The upper surface is brown; in the ♂ the inner angle and the inner margin of the hindwing have a blue reflection. In the ♀ this reflection, which is here more violet, is extended over the whole hindwing and the greater part of the forewing. The under surface is in both sexes glossy violet-blue with broad, reddish brown median stripes, one eye-spot on the forewing and 5 on the hindwing, of which the 4th is of a flattened form and is divided longitudinally by a silver stripe, while the 3rd is little prominent and only recognizable by its round silvery central spot. The species is common in Surinam, on the Amazon and in Bahia. — **agatha** *Btlr.* (49 e) is a form of *chloris* in which the distal margin *agatha.* of the forewing is less excised and the hindwing more ample; the brown ground-colour is darker and the blue colouring on the hindwing more extended. On the under surface the outer median band on the hindwing forms an obtuse angle in the middle and an acute angle at the inner margin. The ocelli are larger. The 2nd eye-spot is placed so near to the distal margin that it touches the submarginal line. The 3rd and 4th eye-spots consist of elongate orange-yellow rings with silvery centres. The ♀ is more thinly scaled, of more violet colour, with red-brown margins; the ocelli of the under surface show through above. Beneath the median bands of the hindwing are placed nearer together. From Pará. — A considerably larger form of 45 mm. expanse I name **agathina** *form. nov.* It has much broader wings, is more thickly and densely scaled and hence not trans- *agathina.* parent. Above dark brown, the greater part of the hindwing dark steel-blue, only the costal margin dark brown for a breadth of about 10 mm. The under surface has on both wings a bright blue reflection, especially in the posterior half of the hindwing. The median bands are dark brown and on the hindwing straight, only on the forewing the 2nd band is somewhat distally curved before the inner margin. The two elongated eye-spots of *agatha* are here not bordered with orange-yellow but with brown. From Macas in Ecuador.

marica. **E. marica** *Stgr. i. l.* (49 e). The wings are thinly scaled, above brown with dark violet-blue reflection, which gradually shades into the broad brown distal margin. The bands and eye-spots of the under surface show through above. Beneath light violet with bluish gloss. The forewing with 3, the hindwing with 2 broad brown transverse bands, the distal forming an angle on the median of the hindwing and an acute angle distad before the inner margin. Forewing with one, hindwing with 3 ocelli, all black with yellow and brown rings and white pupils, the posterior eye-spot bi-pupilled. Between the eye-spots of the hindwing the yellow-brown, oval spots with silvery pupils as in the allied species. *marica* is easy to distinguish from the latter by having the two larger ocelli in cellules 2 and 5 of equal size. From Pebas on the Amazon in Peru.

herse. **E. herse** *Cr.* (= herseis *Godt.*) (49 e). Above dull violet with blue reflection. Forewing with brown costal and distal margins, the latter twice as broad as the former, with 2 straight median stripes, 3 marginal lines and a round brown spot before the apex. On the hindwing the first median stripe is straight, the 2nd forms on the median a sharp, distally directed tooth. Before the anal angle a large black eye-spot with yellow ring and at the apex 2 smaller, obscure eye-spots. Beneath the ground-colour is light violet-grey, the transverse stripes yellow-brown. Forewing with one eye-spot, hindwing with 3, the first very small, the last large, all black with red-yellow and brown rings, all (also the one on the forewing) with double white pupils. Between the eye-spots in cellules 3 and 4 two red-yellow spots with silvery centres. From Surinam, Pará, Merida (Venezuela) and Villavicencia (East Colombia [Fassl]).

callichloris. **E. callichloris** *Btlr.* Similar to *herse.* Above brown. The wings at the base transparent, violet. The third band on the forewing nearer to the margin, the first on the hindwing indistinct, the others strongly angled, the anal eye-spot large and black, with yellow ring, the others indistinct. The under surface is according to Butler's figure lilac, according to his description whitish, the bands of the forewing as above. On the hindwing the basal area is filled up with brown to the first transverse band, the 2nd band forms an acute angle distad. The yellow rings round the eye-spots are very broad, interrupting the brown bordering, and forming a continuous yellow band on which are placed in cellules 2 and 5 round black spots with silvery double pupil and in cellules 3 and 4 silvery streaks. The eye-spot in cellule 2 is larger, that in cellule 5 smaller. The still smaller eye-spot in cellule 6, which is likewise black and has a double silver pupil, is isolated and placed in a yellow and brown ring. From Ega (on the Amazon).

Tolumnia Group.

On the upperside of the forewing in the ♂♂ is placed at the hindmargin of the cell a narrow stripe of scent-scales adjoining the stalk of the median and consisting of hair-like scales.

tolumnia. **E. tolumnia** *Cr.* (49 f). Above dark brown, the posterior half of the hindwing with bright blue gloss. The stripe of scent-scales of the ♂♂ along the median of the forewing is distinct. On the under surface the ground-colour is more yellowish between the transverse stripes and only the distal half of the hindwing is light bluish violet. The eye-spots have silvery pupils, those of the last larger eye-spot are double and produced lengthwise. From Surinam, the Lower Amazon and Bahia.

catharina. **E. catharina** *Stgr.* Forewing brown, in the ♂♂ with a narrow stripe of hair-shaped black-brown scales along the median, otherwise without markings. Hindwing almost entirely blue, only the costal margin broadly, the distal and inner margins narrowly brown. On the under surface the basal half of the forewing and the anterior part of the hindwing are brown-grey, the distal margin of both wings and the inner margin of the hindwing light blue. Forewing with 3 narrow brown transverse stripes, hindwing with 2 which diverge posteriorly. Before the inner margin of the hindwing the outer stripe forms an angle. Forewing with 1, hindwing with 2 small eye-spots at the apex and a large one in cellule 2, between them the 2 yellow ellipses with silver dots as in *tolumnia.* 36 mm. From Jurimaguas in the Upper Amazon district.

hewitsonii. **E. hewitsonii** *Btlr.* (= polla *Möschl.*) (49 e). A small but beautiful species. Brown, the scent-scale stripe of the ♂ somewhat darker. The distal margin with blue reflection, the inner margin bright glossy blue. Hindwing at the base whitish, distally with blue reflection. Both wings with white fringes. Vein 1a on the ♂ hindwing somewhat thickened in the middle. Forewing beneath lilac, with 3 red-brown transverse stripes. 2 straight marginal lines and an eye-spot before the apex. Hindwing at the base lilac, distally blue with 2 transverse stripes, 2 eye-spots at the apex and a very large anal ocellus; between the eye-spots 2 brownish yellow ellipses with silvery blue centres. From the Lower Amazon (Pará). Butler mentions a form from the Upper Amazon (Ega, now Teffé) without naming it; it differs in having the ground-colour above and beneath more greenish. *polla Möschl.*, from Surinam, I regard as likewise a *hewitsonii*, as the figure and description almost entirely agree with this. The only difference in the figure consists in the absence of the elliptical spots on the hindwing. But in the text Möschler mentions these as present, so that this may be only an error in the figure. The 2nd difference that I find is in the marginal lines on the underside of the forewing. These are straight in *hewitsonii*, Möschler describes the inner of these lines as finely dentate. According to the figure which he gives of his *polla*, however, both are straight. Hence I can only regard *polla* as a synonym of *hewitsonii*.

A~~g~~yaya Group.

E. a~~g~~yaya *Btlr.* (= iris *Fldr.*) (49 g). Above brown with dark brown reflection, which does not quite reach the margins of the wings. In the middle of the hindwing is placed at the end of the cell a tuft of brown hairs, in the vicinity of which the ground-colour is darker. Under surface violet-grey, forewing with 3 broad, straight, brown transverse stripes, 2 marginal lines and a black eye-spot, ringed with brownish yellow, before the apex. Hindwing with the same bands, 3 dentate lines before the distal margin and 3 eye-spots in cellules 2, 3 and 6, all bi-pupilled. In the ♀ the hair-tuft and the dark spot on the upperside of the hindwing are absent. From the Amazon (Tapajos), Colombia (Bogotá). Taken by Fassl in the Llanos of Medina in East Colombia (400 m.) in June. *agaya.*

Doxes Group.

E. doxes *Godt.* (= erycina *Btlr.*) (49 d). Above grey-brown with slight bluish grey sheen and with 2 dark brown marginal and a similar terminal line. On the hindwing are placed 2—4 round dark brown spots in cellules 1 c, 2, 3 and 5, the two last are often absent. The under surface is somewhat lighter and has 2 dark brown median lines, of which the outer one is more or less strongly angled on the hindwing. Forewing without eye-spots, hindwing with 5 or 6 elongate oval ocelli, red-yellow with black pupils, the inner half of which is densely sprinkled with white, silvery scales; the first and the last eye-spot are smaller than the rest. The number of the eye-spots varies, Prof. Seitz has taken both examples with 6 and those with 5 ocelli flying at one place. From Brazil (Esperito Santo). *doxes.*

E. latia *Btlr.* Above brown, hindwing with a rather large ochre-yellow patch before the margin, 4 black spots and undulate ochre-yellow submarginal line. Beneath brown, the distal part of the hindwing whitish, the margin itself brown, the median lines as in *doxes*, but further separated, hindwing with 6 large, oval eye-spots, ringed with red-yellow, the first 2 and the last 2 with large black pupils, dusted with silver at the proximal side, the other 2 with entirely silvery, oval pupils. From Bahia. *latia.*

E. furina *Hew.* (49 d). Above brown, the hindwing with large white median area, at the margin of which are placed some black spots. Forewing beneath brownish grey, with 2 reddish brown median bands, an indistinct grey-brown band in the marginal area with a silver spot in the middle and 3 brown marginal lines. Hindwing white with 2 reddish brown median bands. In the marginal area 6 red-yellow, elongated eye-spots form a broad band, enclosing in each cellule a large spot, which is distally black, proximally dusted with silver and conically pointed. At the margin 3 terminal lines. From the Amazons. *furina.*

E. junonia *Btlr.* The forewing rather elongated, above brown, without markings, hindwing with three dark brown marginal lines and two light lines between them. Beneath brownish grey, with 2 brown median bands, the inner one scarcely reaching the middle of the inner margin of the hindwing, the outer terminating at the 6th eye-spot. These eye-spots are as in *furina*, but the first two smaller. From Tapajos (Amazons). *junonia.*

E. gemmula *Btlr.* Above brown, the hindwing at the anal angle lighter, with 1 or 2 black spots and 2 black-brown or rust-brown marginal lines. Beneath lighter with 2 narrow, rust-coloured, widely separated median stripes and 2 angular marginal lines, brown on the forewing, rust-coloured on the hindwing; the distal margin itself narrowly black. Hindwing in the ♂ with 5, in the ♀ with 6 eye-spots, which, however, are more round than oval and are all broadly margined with yellow. The pupil of the 2nd and of the 5th eye-spot is distally black, proximally greenish silvery, the others have the pupils entirely greenish silvery. Rio de Janeiro. *gemmula.*

Clorimene Group.

E. cosmophila *Hbn.* (♀ = argenteus *Swains.*) (49 f). Above grey-brown. The distal margin darker, before the margin of the hindwing a washed-out brownish ochre-yellow patch, in which are placed 1 or 2 round black spots with or without white central dot. 3 dark brown marginal lines. Beneath much lighter, with 2 widely separated, fine brown median lines and 3 dark brown marginal lines. Forewing in the marginal area with a row of brown spots, which are sprinkled with fine gold dots and enclosed both proximally and distally by an undulate brown line. On the hindwing is placed in the marginal area an ochre-yellow band, anteriorly narrow, posteriorly broad, on which are scattered 6—8 shining golden spots, and in cellule 2 a black spot with golden double pupill. Brazil (Parana, Bahia). *cosmophila.*

E. clementia *Btlr.* Above light olive-brown with indistinct dark median line and somewhat darker margin. Hindwing with 4 brown discal spots and 2 dentate marginal lines on a lighter ground. Beneath lighter with 2 dark brown median lines, diverging anteriorly on both wings, and 3 dark brown marginal lines. In the marginal area of the forewing are placed on a brown band a row of indistinct, silver-dusted eye-shaped spots. On the hindwing the disc is snow-white and traversed by a broad, ochreous, brown-margined band, which contains 3 black eye-spots with silver pupils (2 at the apex and one at the anal angle). Between and behind the eye-spots some elongate silver spots. From Chanchamayo in Peru. *clementia.*

telesphora. **E. telesphora** *Btlr.* (= telesiphora *Kirby*) (49 f). Above brown with 3 darker marginal lines, hindwing in the middle somewhat lighter, at the anal angle a dark brown spot. Beneath grey-brown with a row of black, silver-centred dots, enclosed in groups of 2 or 3 by brown rings, all again enclosed by an outer brown line. Hindwing light yellowish, at the margin reddish yellow with 3 black eye-spots with silver pupils as in the preceding species, and with several silver dots between and behind them, all margined with black. From the Marcapata (Peru).

clorimene. **E. clorimene** *Stoll.* Above brown with the distal margin lighter; hindwing with a narrow and a somewhat broader, dentate, pale yellow marginal stripe and a small eye-shaped spot at the anal angle. Beneath lighter, the distal margin brownish yellow, with narrow brown transverse lines and a broader brown stripe, which is intersected by a silver line. On the middle of the hindwing a broad light brown transverse band, through which runs a yellow-brown stripe. The marginal area is brownish yellow with 4 round silver spots, placed in black rings. Between and behind these rings are placed 3 silver streaks, which reach the distal margin. The distal margin itself is bordered by 3 black and 2 light yellow lines. From Surinam. Rare.

pagyris. **E. pagyris** *Godt.* (49 f). Above brown, forewing without markings, hindwing towards the anal angle whitish with 3 black dots, of which the middle is the largest. The forewing beneath brown with 2 rust-coloured transverse stripes and before the distal margin a row of silvery dots. The hindwing beneath in the basal half grey with the same 2 rust-coloured transverse stripes as the forewing, in the distal half yellowish with 7 silver spots, of which 5 are nearly round and placed parallel to the distal margin, the other two, and especially the one next to the inner margin, elongated and reaching the second rust-coloured stripe. Between the 4th and 5th of these round spots there is a large, oval, black spot, transversely placed and marked with 2 thick silver dots. On the grey distal margin are placed 2 blackish undulate lines. From Brazil.

hygina. **E. hygina** *Btlr.* (49 f). Pale olive-brown. Hindwing with a large red-yellow discal spot, surrounded by 5 blackish spots, of which the 3 smaller, anterior ones form a triangle. Beneath whitish brown, the transverse lines and silver spots similar to those of the preceding species, but the 2nd transverse line on the hindwing very irregular and the marginal area beyond it almost entirely filled up by the bright red-yellow bordering of the silver spots. From Brazil (Joinville).

salvini. **E. salvini** *Btlr.* (49 f). Grey-brown, basal half of the forewing lighter. The dark transverse stripes of the under surface show through distinctly above. The hindwing in the middle whitish with 2 round black spots at the apex and a larger one in cellule 2, between them two smaller ones nearer to the distal margin. Beneath white, forewing with 6 brown transverse stripes, the first oblique, the 4th and 6th connected anteriorly and posteriorly, so that they enclose the 5th stripe, on which is placed a row of silver dots. The hindwing has in the basal area 3 straight brown stripes and in the ochre-yellow marginal area, which is posteriorly bordered with brown, an angled row of silver spots, some of them in black rings. From Panama and Peru.

itonis. **E. itonis** *Hew.* (49 g). On the upper surface the space between the 3 black marginal lines of the hindwing is reddish brown, and towards the anal angle white. The large white area of the hindwing is divided on the under surface by 2 brown transverse lines, which are here present also on the forewing. For the rest the ground-colour beneath is grey-brown. In the marginal area of the forewing are further 6 parallel brown lines, posteriorly somewhat convergent; among them is a somewhat broader stripe, enclosing a row of silver dots. In the ochre-yellow marginal area of the hindwing, which is distally bordered by an undulate, proximally by a dentate, brown line, is placed at the anal angle a black eye-spot measuring over 3 mm., with thick silvery pupil, *quadrina.* behind it 3 small silver spots and before it 6 somewhat larger ones. From the Amazons (Pará). — **quadrina** *Btlr.* is a form of *itonis* in which the white area of the hindwing has acquired an almost quadrate shape. The lines on the under surface of the forewing are more widely separated and not curved posteriorly. From Maranham.

libitina. **E. libitina** *Btlr.* Above brown with a triangular black median spot and 2 marginal lines, hindwing at the distal margin lighter with 3 black marginal lines. Beneath much lighter. Forewing with 2 brown median and 3 submarginal lines, between them a white band with silver-pupilled spots. Hindwing with 2 ochre-brown median lines, the distal part orange with 8 silver spots, a short white, black-edged band and a similar dot before the margin, a black spot at the anal angle, divided by a white line, and with a small, black-bordered silver spot above it. 43 mm. From Brazil. Rare, only in coll. Druce.

Phocion Group.

phocion **E. phocion** *F.* (= areolatus *Sm.-Abb.*, helicta *Hbn.*) (49 g). Above unicolorous brown. Under surface lighter, with the middle ones of the rust-coloured lines on each wing joined into a circle, in which are placed on the forewing 3 or 4 eye-shaped spots with blue pupils and yellow iris (sometimes indistinct), on the hindwing 6 similar elongated spots with oval pupils. The egg of this species is yellow-green; it has quite fine, rough surface. Larva green with the head scarcely elevated, but with long anal points. Pupa obtuse, rounded, deep green, the wing-cases margined with whitish. The larva lives on grasses and is difficult to breed. Habits as in *cornelius*. The butterfly is distributed in North America from New Jersey to the Gulf of Mexico and Texas.

cornelius. **E. cornelius** *F.* (= gemma *Hbn.*) (49 f). Above grey-brown, hindwing at the distal margin with 2 indistinct, blackish double spots. Under surface grey-brown, finely irrorated with brown, with 2 indistinct, brownmedian lines. Hindwing with 4 small black double spots close to the distal margin, with very small silver spots before, beside and behind them, and also a faint violet spot, with slight silver gloss, at their proximal side. Egg yellow-greenish white with rough surface, yields the larva in April or August after 3—6 days. The summer form of the larva grey-yellow-brown, the spring form light green with light whitish yellow lateral and longitudinal lines. Pupa yellow-grey or light blue-green, head with two slight points. On grass. The larva shows a preference for the vicinity of water, and is consequently often very common in wet places, sometimes in company with *hermes*. The species is distributed in North America from West Virginia to Mexico and also occurs in Guatemala.

argentella. **E. argentella** *Btlr.* (49 g). Above brown, the distal margin somewhat darker. Hindwing at the anal angle somewhat produced and with 2 dark spots at the distal margin in cellules 3 and 4. Beneath somewhat lighter. Forewing with three dark transverse lines, hindwing with 2 transverse lines, the 2nd strongly curved inwards and outwards, the ground-colour behind it lighter. In cellule 3 and in cellule 4 a black eye-spot with obliquely placed pupil composed of scattered silvery scales and with red-yellow ring. Before the eye-spots are placed in cellules 5 and 6 two round silver spots and behind them in cellules 1 b and 2 silvery streaks curved in S-shape. From the Volcan de Chiriqui (Panama), also from Guatemala and Costa Rica. The examples from Costa Rica have a yellowish spot on the hindwing.

rogersi. **E. rogersi** *Godm.* Similar to *argentella*, but the hindwing has only one black spot close to the distal margin in cellule 4, containing a light central dot. The anal angle is more strongly produced. On the brown under surface are placed 3 dark brown transverse lines and between the 2nd and 3rd a grey-yellow band, extending across both wings. At the apex of the hindwing a larger and a smaller eye-spot and some silver spots above them. From the volcano of Irazu in Costa Rica.

philodice. **E. philodice** *Godm.* Above reddish brown. Hindwing at the anal angle, as in the two preceding, obtusely produced, with an ochre-yellow stripe behind the middle and 3 dark brown spots before the distal margin. Beneath reddish brown, with 3 rust-coloured transverse lines. Between the two outer of these lines is placed a straight, light reddish yellow band, which begins in a point not far from the costal margin of the forewing and terminates obtusely before the inner margin of the hindwing. Before the distal margin of the hindwing a row of dark brown spots, the middle two the largest, all with sagittate silvery pupils. The ♀ is lighter and has the wings more rounded. From Costa Rica (volcano of Irazu).

nelsoni. **E. nelsoni** *Godm.* Above light olive-brown, the distal margin broadly dark brown, enclosing indistinct black spots. Beneath the forewing is brown, with 3 darker transverse lines, hindwing with straight whitish yellow band, which runs from the apex to the inner angle, a brown median line, before the middle of the distal margin 2 black eye-spots with sagittate pupils and on both sides of these similar silver markings. The ♀ is larger, has the median area of the hindwing above almost ochre-yellow, the dark distal margin is narrower and the black submarginal spots stand out distinctly. On the under surface the light band of the hindwing is absent. From Cerro de Zunil in Guatemala. Elevations of 6000 ft.

clinas. **E. clinas** *Godm.* Forewing with the apex truncate, the distal margin is bluntly angled at vein 5, posteriorly concave. Hindwing sharply produced at the inner angle, undulate at the distal margin. Above brown, forewing dark brown at the costal and distal margins, hindwing with 3 round black spots before the distal margin in cellules 3, 4 and 5. Beneath lighter reddish brown with 3 common transverse lines, namely 2 median and one submarginal, hindwing with 2 black, yellow-ringed ocelli with double silvery pupils before the middle of the distal margin, with 2 round silver spots at the anal angle and a sagittate silver spot between the median veins. Mexico (Guerrero, Sierra Madre del Sur). 7—8000 ft.

Pyracmon Group.

The ♂♂ have a dark scale-spot between and behind the median veins.

pyracmon. **E. pyracmon** *Btlr.* (♂ = hilaria *Godm.* [Biol. Amer. pl. 107, fig. 11, 12]). ♂ above reddish brown, with the distal margin darker, and with large dark brown scale-spot behind the median of the forewing. Hindwing dark brown, at the margin lighter, with 2 black spots bordered with reddish brown in cellules 3 and 4 near the distal margin. In the ♀ the forewing above has a straight, the hindwing an undulate dark brown median line, which is distally margined with red. Hindmargin of the forewing and apex of the hindwing darker brown. Anal angle reddish with 3 black submarginal spots. The under surface in ♂ and ♀ is yellowish brown with 3 dentate transverse lines on the forewing and 2 on the hindwing. Before the middle of the distal margin on the hindwing 2 black eye-spots in red-yellow rings and with silvery double pupils. Before these a glossy grey stripe accompanied by some silver spots at the costal margin and a silver line at the anal angle. From Mexico, Guatemala, Costa Rica, Panama. The ♂ figured in the Biol. Centr. Amer. pl. 107, fig. 11 and 12 under the name *hilaria* is referred by GODMAN in the text to *pyracmon* and the name *hilaria*, which is thus set free, is applied to another species (the next but one).

pephredo. **E. pephredo** *Godm.* Is similar to *cornelius F.* and chiefly differs from it in the ♂♂ having on the upperside of the forewing a dark brown scale-spot, of which there is no trace in *cornelius.* This wing is also more produced at the apex. From Mexico (Guerrero and Cordova) and from the central valleys of Guatemala.

hilaria. **E. hilaria** *Godm.* ♂ above pale brown; forewing below the median darker striped by reason of the scale-spot, hindwing with 2 blackish spots at the margin, which are sometimes indistinct. Beneath lighter, dusted with brown, forewing with 3 undulate, hindwing with 2 rust-coloured lines, a row of silver spots at the margin and 2 black double spots in the middle of them, besides an ochre-yellow transverse line before them. The ♀ is similar to the ♂, but has sometimes on the upperside of the forewing two rust-coloured lines, on the hindwing one. From Mexico and Panama.

henshawi. **E. henshawi** *Edw.* Above reddish brown, the ♂ with the dark brown scale-spot of the preceding species behind the median of the forewing. The distal margin of both wings is faintly dusted with darker, in the middle of the distal margin of the hindwing two blackish spots. The body is black-brown. The under surface is similar to that of *E. cornelius.* 41 mm. — The egg is broader than high, almost spherical; at the base broadly flattened, of green colour and with very fine, little raised net-work on its surface. Concerning larva and pupa nothing is known. South Colorado and Arizona, distributed in the Rocky Mountains. Mexico (N. Sonora, Jalisco, Pinal, near Puebla, very common at 8000 ft. in a pine forest).

Mycalesoides Group.

mycalesoides. **E. mycalesoides** *Fldr.* (49 g). The wings are rounded and above unicolorous dark brown. The under surface is nearly as dark, the two median lines form large undulate curves, the inner is indistinct. The 3 marginal lines are not undulate, but run parallel with the smooth distal margin. On the forewing 2 eye-spots, in cellules 2 and 5, the former twice as large as the latter. They are black with white pupil and yellow ring. On the hindwing 4 similarly coloured eye-spots, two small ones in cellule 1 c, that in cellule 2 the largest. From Colombia (Bogotá). The figure is from Felder's type in the Tring Museum. The species, which was described by Felder as a *Pronophila*, was referred by Thieme to *Pedaliodes.* According to our figure it seems to me to belong to *Euptychia. mycalesoides Smith & Kirby* has nothing to do with this species.

Addenda.

lupita. **E. lupita** *Reak.* ♀ above brown with 2 narrow dark brown marginal lines. Beneath lighter with 3 marginal lines, the proximal one the broadest. Forewing with 2 brown transverse stripes between middle and base, a short stripe between them and a black eye-spot with light brown ring before the apex. Hindwing with 3 indistinct brown transverse lines through the middle and several shorter ones towards the base, a black eye-spot ringed with yellow-brown at the apex and two at the anal angle. Antenna rust-coloured. 32 mm. From Mexico (Vera Cruz and Orizaba).

moneca. **E. moneca** *Schaus.* ♀. Above brown with 3 dark marginal lines and a dot at the margin of the cell, the outer median line angled before the costa of the forewing, on the hindwing incurved before the middle, the inner median line indistinct, 2 eye-spots before the anal angle, the posterior the smaller. Beneath lighter brown, striated with darker, the lines all distinct. Forewing with a small eye-spot before the apex, hindwing with 6 ocelli, those in cellules 2 and 5 with silvery double pupils, a small similar one in cellule 4, smaller eye-spot with single pupils in cellules 1 b, 3 and 6. In the ♂ the eye-spots are smaller. 29—33 mm. From Castro in Parana and from Novo Friborgo.

burgia. **E. burgia** *Schaus.* ♀. Above brown, with straight, black distal median line, reaching to the anal angle of the hindwing, and with 3 marginal lines. Beneath olive-brown, the first transverse line angled and not reaching the costa of the forewing, the 2nd straight and distally bordered with lilac; 3 fine marginal lines. Forewing with 4, hindwing with 5 small ocelli. 40 mm. From Novo Friborgo. Will belong to the *Hermes* group.

borasta. **E. borasta** *Schaus.* ♂. Above brown with 3 marginal lines, a large and a small eye-spot at the anal angle of the hindwing with broad yellow rings and silver pupils. Beneath grey-brown, finely sprinkled with brown, with 2 brown median lines, the inner one curved distad on the forewing, the outer proximad. Distally to the latter is placed a white band, traversed by a brown shade. On the hindwing this becomes ochre-yellow at vein 3. On the forewing is placed in this shade an indistinct eye-spot, on the hindwing at the apex two black eye-spots with yellow rings and silver pupils and in the ochre-yellow part of the band, at the anal angle, 2 black spots with silver pupils. At the margin 3 dark lines as above. From Novo Friborgo (Brazil).

12. Genus: **Pindis** *Fldr.*

Approaches the genus *Taygetis*, but the eyes are naked, the palpi elongate, roughly scaled to the tip, the middle joint 1½ times as long as the head, sparsely bristled, the terminal joint similarly formed, $^{1}/_{3}$ as long, obtuse. Wings broad, rather short. Forewing at the apex concavely truncate. Hindwing at the inner angle rather convex, the posterior part of the distal margin strongly dentate. The only species, which occurs in Mexico and Guatemala, is referred by most authors to *Euptychia.*

squamistriga. **P. squamistriga** *Fldr.* (= Eupt. zabdi *Btlr.*) (50 a). Above brown, forewing somewhat lighter at the apex. Beneath likewise lighter, dotted with brownish. The first transverse line is absent on the forewing.

the 2nd forms an obtuse angle on the hindwing. In the marginal area of the hindwing 6 small eye-spots, only the last but one somewhat larger. Rare in Guatemala (Choctum), not rare in West and Central Mexico.

13. Genus: **Cyllopsis** *Fldr.*

Likewise near *Taygetis*, the eyes naked. The palpus much more slender, its 2nd joint more than twice as long as the head, the terminal joint pointed. The distal margin of the forewing with rounded projection below the apex, that of the hindwing almost right-angled at vein 3 and obtusely angled at the anal angle. For the rest the distal margin of the hindwing is slightly undulate. The upper discocellular vein of the forewing is entirely absent. The genus has a similar range of distribution to the preceding, and likewise contains only one species, referred by many authors to *Euptychia*.

hedemanni. **C. hedemanni** *Fldr.* (= Eupt. ithama *Btlr.*, ithamna *Godm.* [in tab. Eupt. vetones *Godm.*]) (50 a). ♂: above brown with a small black spot at the margin of the hindwing above the projecting angle. Beneath lighter, finely striated with brown all over, with 2 darker median stripes on both wings and a submarginal line on the forewing. A black eye-spot with double silvery pupil and surrounded by a light brown and a dark brown ring is placed in cellule 3 on the hindwing close to the distal margin. Beside it at the distal margin several silvery double dots. The ♀ is somewhat larger and bears on the upperside of both wings a rust-red line behind the middle, according to the figure in Godman also a second similarly coloured line before the middle. Rare. From Mexico, Guatemala, Costa Rica. Elevations of 2000—7000 ft.

14. Genus: **Oressinoma** *Westw.*

Distinguished from all the other American Satyrid genera by not having the costal vein of the forewing inflated, while on the other hand the median and submedian are strongly swollen at the base. The first median vein arises just behind the swelling of the median stem. The eyes are naked. The shape of the wings is longer than broad. The area of distribution is the west of tropical South America.

typhla. *sorata.* **O. typhla** *Dbl. & Hew.* (50 a). A species easy to recognize by the broad white band above and beneath. The basal area is above unicolorous and beneath marbled with brown and white. The dark brown distal margin is beneath divided for its entire length by a tri-coloured stripe, strongly dentate on the hindwing. This stripe is distally orange, proximally white, the two colours separated by a black line. Rather common in Colombia, Venezuela, Ecuador and Peru; rare in Costa Rica. — **sorata** *Godm. & Salv.* is a form of *typhla* in which the white band on both wings is narrower. In the distal margin are placed on the hindwing above white crescents, on the forewing a whitish line, which markings are also often indicated in *typhla*. From Bolivia (Callcan).

15. Genus: **Paramecera** *Btlr.*

Costal and median of the forewing inflated at the base, costal margin convex, distal margin slightly excised, upper discocellular short, middle discocellular longer and obliquely placed, behind the median in the ♂♂ a patch of dense, compact scales. Hindwing with the costa convex, distal margin sinuate, inner margin excised at the anal angle. Eyes somewhat hairy, palpus strongly haired, the terminal joint slenderer and directed more anteriorly than in *Euptychia*. Antenna short, the club pear-shaped, hollowed out on the underside. The single species is Mexican and resembles the European *Pararge megera*.

xicaque. **P. xicaque** *Reak.* (= Neonympha epiniphele *Fldr.*) (50 a). Reddish brown, distal margin and the spot behind the median darker. Forewing with 2 or 3 round black spots, hindwing with 5, the distal margin of the hindwing is reddish at the anal angle and has 2 dark brown, parallel marginal lines. Beneath the ground-colour is more yellowish with 2 strongly dentate median, a submarginal and 2 marginal lines. On the forewing 2 or 3 eye-spots, the first large, the last small, and 6 eye-spots on the hindwing, all of fairly uniform size. The ♀ is somewhat larger, otherwise similar to the ♂, except that the brown spot behind the median on the upperside is absent. The species was formerly very rare, but has recently been found more commonly. It inhabits the higher mountain regions of Mexico (Oaxaca, Jalapa, Puebla, Misantla, Bolannos, Maltrata, Guerrero, Vera Cruz, etc.). The figure is from Felder's type in the Tring Museum.

16. Genus: **Satyrodes** *Scudd.*

Only the costal of the forewing is somewhat thickened or slightly swollen, the first 2 subcostal veins arise before the end of the cell, the upper discocellular is wanting. The margin of both wings is rounded. The eyes are slightly hairy, the palpus slender, beneath hairy, the 3rd joint short and pointed. One North American species.

canthus. **S. canthus** *L.* (= euridice *Joh.*, cantheus *Godt.*, boisduvalii *Harr.*) (50 a). The round brown spots of the upper surface are replaced beneath on both wings by a row of black, white-pupilled eye-spots ringed with brown and yellow. The ground-colour of the under surface is yellowish grey with 2 brown transverse lines through the middle, the first straight, the second dentate. Between the two a short streak on the transverse vein. At the margin two yellow terminal lines and between these a brown one. — The egg is smooth, with whitish gloss, at the base flattened, above round. The larva deep green with red points on the head, yellow lateral stripe and light longitudinal lines. The pupa is more slender then that of *Enod. portlandia*, light grass-green with the edges of the wing-cases yellow and with yellow subdorsal and lateral lines on the abdominal part. The anterior end is pointed. The larva hibernates and feeds till the beginning of June on Cyperaceae, etc. The butterfly flies in July in wet grassy places and is locally common in the northern United States, but also occurs in Canada and the higher, cool mountain-valleys of Carolina.

17. Genus: **Coenonympha** *Hbn.*

The principal distinguishing character of this genus, which consists only of small butterflies, is that the costal, the median and the submedian of the forewing are all strongly swollen at the base. The palpus is densely clothed with erect hairs, the terminal joint porrect. Antenna short, but with relatively long club. Eyes naked. Both wings rounded at the distal margin. The species of this genus are distributed over the northern temperate zone of the Old and the New World, but the American species occur for the most part only in the western states of the Union. On the *Coenonympha* of the Old World cf. vol. I, p. 142—147, pl. 48; further vol. IX, p. 301.

california. **C. california** *Dbl. & Hew.* (50 a). This species may be known by its white, unmarked upper surface, which is only somewhat dusted with blackish at the base. The under surface is finely dusted with brownish, especially on the hindwing, and shows a whitish dentate band through the middle and behind it 1 ocellus on the forewing and 3 on the hindwing. The ♀ is somewhat larger and beneath darker than the ♂. The butterfly occurs in a succession of broods, and is common in sandy and grassy places. — *galactinus.* **galactinus** *Bdv.* (50 b) is the winter form of *california*. It is much lighter beneath and the eye-spots before the margin are much smaller. The egg is almost spherical, light coloured, with very low, fine ribs. Larva slender, elongate, with round head, green or brown, longitudinally striped. Pupa stout and short, obtuse, green or brownish, the wing-cases marked with oblique black stripes. The species is distributed along the whole western coast of the United States from Vancouver Island to California. — *ceres.* **ceres** *Btlr.* (= eryngii *H. Edw.*) is a form of *california* with the upperside pale ochre-yellow and the forewing beneath reddish with the base lighter. Beneath in addition the costal margin of the forewing and a broad band before the apex are grey, a transverse band behind the middle yellowish rust-coloured; the hindwing is pale grey with the base brownish and bears an irregular pale yellow median band and 2 black dots before the margin enclosed in light yellow rings. From California. — *pulla.* **pulla** *H. Edw.* is a form with the upper surface entirely fawn-coloured with blackish shading at the base. The under surface is dull brown with a reddish tone in the discal area. On account of the dark ground-colour the markings are only indistinct. From San Mateo, California. Appears to be a dark aberration of *california*, as only 1 example was known to the author.

elko. **C. elko** *Edw.* (50 b). Above ochre-yellow with whitish fringes and the inner margin of the hindwing whitish. Base somewhat dusted with blackish. On the under surface the forewing is somewhat lighter ochre-yellow, costal margin and apex finely dusted with brown, with a lighter half-band. Hindwing quite finely dusted with brown, with light yellow half-band at the middle of the costal margin. Above and beneath in both sexes without eye-spots. From Nevada and Washington. June. — *ampelos.* **ampelos** *Edw.* (50 b) is a form of *elko* which differs in the somewhat stronger brown dusting on the under surface and further in having the light band on the under surface prolonged or continued by separate spots. Distributed from Nevada westwards to Vancouver Island. — The egg is conical, yellow-green, the surface less ribbed than in *galactinus*. The young larva is similar to that of *galactinus*, with only slight differences in the colouring; when full grown it is 18 mm. in length, laterally yellow-green, with small white tubercles each bearing a short hair, posteriorly with 2 short, conical reddish tails. The pupa is shaped like that of *galactinus*, 10 mm. in length, green with black stripes and dots. The period from oviposition to the appearance of the imago is in the summer 49 days.

ochracea. **C. ochracea** *Edw.* (50 b). Above unicolorous, bright ochre-yellow, with the markings of the under surface showing through faintly in places. Underside of the forewing reddish yellow, before the apex with a small black, white-pupilled ocellus in a light yellow ring, and before this a light yellow band. The hindwing is dusted with yellowish brown and shows at the base 2 light yellow spots, in the middle a light yellow dentate band and before the distal margin one or sometimes several small, eye-shaped, black dots in light yellow rings. Distributed in the western part of North America from British Columbia to Arizona and eastwards to Kansas.

brenda. **C. brenda** *Edw.* Above light reddish yellow, without markings, beneath somewhat yellower; the forewing with a reddish transverse line beyond the middle, anteriorly straight, posteriorly curved. The hindwing has a similar line, which is anteriorly angled, posteriorly curved. Forewing with a large round black spot before the apex and a dot between medians 1 and 2. Hindwing with a more or less complete row of small dots. The ♀ is on the under surface darker, with an admixture of grey, the spot before the apex of the forewing has a white pupil and on the hindwing some of the dots are absent. From Los Angelos. *brenda* is regarded by

DYAR as a synonym of *ochracea*, by SKINNER on the contrary as a good species; as I do not known the species in nature, I leave the question undecided.

C. kodiak *Edw.* is above light yellowish grey with a pale yellow transverse band beyond the middle of both wings. The basal area of the hindwing is more brownish yellow-grey. The upper surface resembles that of *california Dbl.* except that *kodiak* is much darker. The same is the case on the under surface. From Alaska. Rare. — **yukonensis** *Holl.* has been described as a form of *kodiak*. The upper surface of the forewing is light ochre-yellow, the distal and costal margins grey, an indistinct white band behind the middle; hindwing dark grey, somewhat yellowish, with a dirty white, interrupted median band. On the under surface the forewing is dark ochre-yellow, sometimes chestnut-brown, shading off into grey before the apex and at the distal margin. The white band is here sharply expressed. A small eye-spot with white pupil before the apex. Hindwing blackish grey, distally lighter, with sharp white median band. A row of eye-spots is faintly indicated before the margin. The ♀ is somewhat larger and altogether lighter. Likewise from Alaska. July. It may be a separate species. *kodiak.* *yukonensis.*

C. pamphiloides *Reak.* Authors are of different opinions as to the specific rights of this butterfly. Some consider it to be the same as the European *pamphilus L.*, others regard it as different. As I do not know the form in nature I cannot express a definate opinion. The entire upper surface and the under surface of the forewing are similar to those of *pamphilus* (vol. I, pl. 48 g). But according to the figure which HOLLAND gives in his Butterfly Book, the ground-colour of the hindwing beneath is not greenish grey but lighter, more yellowish grey, in the basal area are placed 2 light yellow spots, a dentate light yellow band runs through the middle, and before the margin there is a row of 6 round light yellow spots with black central dots. These dots are sometimes absent. The ♀ is larger than *pamphilus*. From Utah and California. *pamphiloides.*

C. inornata *Edw.* (50 b). Above brownish ochre-yellow, in the middle somewhat lighter. Costa of the forewing and distal margin of both wings grey. Beneath the forewing shows a distinct ocellus and a narrow white band. The hindwing is grey with a short dentate white band through the middle and before the distal margin an indistinct red-yellow band, interrupted at the veins. This species is regarded by various authors as a form of the European *tiphon Rott.* (vol. 1, pl. 48 h). But the latter has on the underside of the hindwing a row of six black, white-pupilled ocelli in light yellow rings and HOLLAND is therefore probably right in considering *inornata* as a separate species. From Montana, Minnesota, British North America and Newfoundland. *inornata.*

C. haydeni *Edw.* (50 b). One of the largest species. The body is dark brown, the antenna black ringed with white. The upper surface is brown, inclining to grey. The fringes of the forewing are somewhat lighter, those of the hindwing grey. The upper surface is without eye-spots. The under surface is lighter, yellowish grey. Before the distal margin on both wings is placed a thick silver line, which is interrupted at the veins. On the hindwing there is beside this line a row of 6 eye-spots, decreasing in size posteriorly, the last ocellus sometimes very small and then scarcely noticeable. These ocelli are black with red-yellow rings and white pupils. From Montana, Idaho, Wyoming and Colorado. *haydeni.*

18. Genus: **Neominois** *Scudd.*

The costal and inner margins of the forewing are straight, the distal margin rounded. The costal margin of the hindwing forms an obtuse angle near the base. The costal vein of the forewing is strongly swollen at the base, the median on the other hand only somewhat thickened. The upper discocellular of the forewing is absent. The antenna is comparatively short, the underside of the palpus very hairy. The two forms of the genus occur in the mountainous western parts of the United States.

N. ridingsii *Edw.* (50 b). Upper surface grey-brown with a white macular band varying somewhat in breadth. The eye-spot at the anal angle of the hindwing is sometimes only punctiform or entirely absent. On the under surface the basal half of both wings is whitish, finely striated with brown, with 2 dentate brown transverse bands through the middle. In the ♀ the eye-spots on the upperside of the forewing are very large and there are more of them. I have before me a ♀ with 4 ocelli forming a continuous row; the first measures 4, the last 3 mm., the others are smaller. — The egg is whitish and almost spherical. The larva yellow-brown, much narrower posteriorly, with rounded head and dark nebulous lines. Pupa obtuse, well rounded, brown, at the anterior margin dark green, at the first spiracle a quite small, spinose, club-shaped process. It lies in a sandy hole on the ground. The butterfly occurs at elevations of 5—7000 ft. and is not rare locally. In Colorado and the western states. — **dionysius** *Scudd.* (= ashtaroth *Streck.*) is a somewhat larger form of *ridingsii*, differing in the lighter, brownish white colour of the basal part of both wings and the broader and lighter submarginal bands. On the under surface the median band of the hindwing is narrower and more sharply dentate and the proximally directed teeth of the brown border likewise more pointed. From Utah, Colorado and Arizona. *ridingsii.* *dionysius.*

19. Genus: **Cercyonis** *Speyer.* (= Satyrus *Westw.* pt.)

The costal margin of the forewing is more strongly, the distal margin more weakly rounded, the inner margin in most species fairly straight. The distal margin of the hindwing is slightly undulate, the posterior part of the inner margin somewhat incurved. The palpus is long, projecting by more than the length of the head, densely haired, the eyes naked. The club of the antenna is thin and long, not sharply defined. The mid-tibia is scarcely spinose. The costal and median of the forewing are strongly swollen at the base, the submedian on the other hand only somewhat thickened. In the forewing the first 2 subcostal veins arise before the end of the cell. The ♂♂ of most species have a more or less distinct stripe of scent-scales on the upperside of the forewing behind the median. Some of the butterflies are of medium size, but some considerably smaller. They inhabit North America. Single species are very similar to European forms of the genus *Satyrus* and hence are referred to *Satyrus* by most American authors.

pegala. **C. pegala** *F.* (50 b, c). The largest species of the genus. Above brown, with broad ochre-yellow band
on the forewing, on which are placed in the ♂ only one eye-spot, in the ♀ two. On the under surface the brown
ground-colour is finely striated all over with dark brown and the hindwing has here 6 ocelli. Sometimes one
of these is absent. The butterfly occurs in the southern part of the United States about as far north as to New
alope. Jersey. — **alope** *F.* (50 c) is the most widely distributed form in North America. It is somewhat smaller, and
has in both sexes above and beneath two eye-spots on the forewing. The scent-scale spots on the upperside
of the ♂ forewing in cellules 1a, 1b and 2 are distinct. The number of the ocelli on the hindwing varies. —
maritima. **maritima** *Edw.* is a form similar to *alope* in which the under surface is darker and the band more orange-coloured.
texana. It occurs in Long Island and Martha's Vineyard. — **texana** *Edw.* (= incana *Edw.*), a further form belonging
here, has light brown ground-colour and ochreous bands. The spots on the underside of the hindwing are larger
nephele. than in the other forms. From the extreme south of the United States. — **nephele** *Kirby* (50 c) was long regarded
as a good species, but is now recognized as a dimorphic form of *alope.* In it the yellow band is much darkened
by brown dusting and only to be recognized as a band in the ♂ on the underside of the forewing. On the
upper surface of the ♂ and on both sides of the ♀ only the brownish yellow rings round the black eye-spots
persist. It is the northern form of the species, and is of general occurrence in North America north of the
latitude of New York from the Atlantic to the Pacific Ocean, but to the south of this only occurs on the heights
olympus. of the Alleghany Mountains. — **olympus** *Edw.* (50 d) is a form similar to *nephele,* in the ♂ somewhat darker,
in the ♀ somewhat lighter, and with only a few eye-spots on the underside of the hindwing. It is common
ariane. in the States west of the Mississippi. — **ariane** *Bdv.* (50 c) is a small form, similar to *alope,* but darker. The
eye-spots stand out distinctly on the upper and under surface of the wings. From British America, Oregon
boopis. and the north-western part of the United States. — **boopis** *Behr* (50 d), a form belonging here, has on the
upperside of the hindwing no eye-spots, on the underside only 1 or 2 indistinct ones. The scent-scale
spots of the ♂♂ are distinctly visible on the upperside of the forewing between the 2nd median vein and the
inner margin. Common on the Pacific coast in the states of Washington, Oregon and North California. — In
baroni. the form **baroni** *Edw.*, which I also regard as belonging here, the yellow rings of the eye-spots above are almost
suppressed, the under surface is more reddish brown, in consequence of which the transverse lines in the middle
gabbi. stand out distinctly. — **gabbi** *Edw.* is another form which is referable to this species. It is of the size of *nephele,*
the ♂ dark reddish brown, the ♀ pale fawn-coloured. Beneath the distal half of the wings in the ♀ is pale
grey-brown, the proximal half only a little darker. On the hindwing are placed here 6 black, white-pupilled
eye-spots in yellow and brown rings, the 2nd and 5th larger than the rest and the last 3 in a straight row
one above another. From Oregon and Utah. — The egg of *alope* is obtusely spherical, as high as broad, above
strongly ribbed, the surface covered with minute pitting and of a lemon-yellow colour. The larva hatches in
14—28 days according to the temperature. The young larva is rose-coloured, hibernates small, afterwards
becoming greenish, and when full-grown is 40 mm. in length, light green, whitish on the dorsum, with light
yellow, dark-bordered lateral stripe and whitish, dark-shaded subdorsal line. It lives on species of grass. Pupa
blue-green, finely marked with white. The butterflies fly in July and August in open woods and grassy places,
are locally very common and visit especially the flowers of Spiraea tomentosa.

meadi. **C. meadi** *Edw.* (50 d) is an independent species, recognizable by its smaller size and the reddish yellow median area on the underside of the forewing. The ♂ is dark brown above, with 2 black eye-spots in broad red-yellow rings on the forewing in cellules 2 and 5, only the anterior having a white pupil. The area round the eye-spots is often more or less strongly dusted with red-yellow, especially the space between them. On the hindwing above there is only one ocellus. In the ♀ the eye-spots of the forewing above are placed on a red- or ochre-yellow band, which extends basewards into the cell, and then gradually passes into the brown ground-colour. — The egg is strongly ribbed at the sides, pitted above, rose-coloured. The larva is green, slender, the head rounded, light longitudinal lines on the back and yellow lateral and subdorsal line. It lives on grass. Pupa obtusely rounded, light green. The butterfly flies in July and August; it is rather local, but common in places, is fond of visiting Compositae, especially a species of Senecio. Localities: Colorado, Montana, Utah and Arizona.

oetus. **C. oetus** *Bdv.* (50e). Above grey-brown, the apex of the forewing lighter, fringes grey, 2 brown marginal lines; the forewing with 2 small round black-grey spots in yellow-brown rings, in the ♂ with brown scent-scale stripe. Beneath yellowish grey, the basal half finely striated with brown, forewing with 2 black-brown eye-spots with ochre-yellow ring and white pupil. The anterior eye-spot is very large, extending over 3 cellules, the posterior is smaller. Both wings with 2 brown marginal and a submarginal line. From North California.

charon. **C. charon** *Edw.* (50d). Above brown, forewing in the ♂ with 1 or 2 black spots without rings, in the ♀ lighter with 2 eye-shaped spots in ochre-yellow rings. The dark brown scent-scale spot of the ♂ extends into cellule 3. On the under surface there are in both sexes eye-spots with yellow rings and white pupils instead of the black spots. Both wings are beneath brown, finely striated with dark brown all over, hindwing with dark brown, dentate median line and a row of more or less distinct, small, black, white-pupilled eye-spots. — Egg, larva and pupa are almost exactly as in *meadi.* The longitudinal lines of the larva are commonly purer white, the pupa sometimes black-brown or black-grey. The butterfly flies near the ground in grassy places and visits especially composites. Flies in June to August. Locality: the west of North America, from British Colombia to New Mexico. — *sylvestris.* **sylvestris** *Edw.* (= phocus *Edw.*) is according to Holland a form of *charon*, with the eye-spots on the underside of the hindwing indistinct. (Kirby in his Catalogue has given *sylvestris Edw.* as the oldest name for *oetus Bdv.*) The figure called *sylvestris* on pl. 50d belongs to *sthenele.*

paulus. **C. paulus** *Edw.* (50d). On the upper surface similar to *charon,* but beneath always with 2 eye-spots on the forewing in ♂ and ♀. The hindwing has also one or 2 eye-like spots on the upper surface. On the under surface the hindwing is grey in the distal third, finely striated with dark brown, proximally bordered by a dark brown dentate line. In this marginal area are placed 5 or 6 black eye-spots with white pupils and yellow and brown rings. From California and Nevada.

sthenele. **C. sthenele** *Bdv.* (50e, the form erroneously called *sylvestris* on pl. 50d also belongs here). Above brown with 2 round black spots on the forewing, of which in the ♂ only the upper is pupilled with white, but in the ♀ both have white pupils and brownish yellow rings. The species is recognizable by the broad, dentate dark median band on the underside of the hindwing, which is strongly constricted in two places and both proximally and especially distally is broadly margined with whitish grey. In the marginal area a row of eye-spots, sometimes indistinct. From California.

wheeleri. **C. wheeleri** *Edw.* (= hoffmani *Streck.*). Similar to *nephele,* but larger, especially the ♀. Ground-colour brown. The forewing above has 3 eye-spots. The apical eye-spot is double, consisting of a larger ocellus in cellule 5 and a smaller in cellule 4. Both are surrounded by a common narrow light yellow ring. In the ♀ these eye-spots are placed on a broad light brown band and 2 eye-spots are also present on the hindwing above before the anal angle. The under surface is not brown as in *nephele*, but in the ♂ light grey, in the ♀ light yellowish grey, finely striated with brown. Forewing with a dentate median stripe and 3 nearly straight marginal lines, all brown. Hindwing with a broken and a second dentate median stripe and 3 undulate lines at the margin. In the ♂ there is on the forewing a small 4th eye-spot in cellule 3, these eye-spots are surrounded in pairs by 2 yellow rings with brown exterior ring. In the ♀ these brown rings are particularly large, measuring 7 mm. in diameter. On the hindwing beneath there are 6 black eye-spots with white pupils in light yellow and brown rings. Nevada.

behrii. **C. behrii** *Grinnell.* Much smaller than the preceding, only 43 mm. in expanse. Brown, forewing with a black, white-pupilled apical ocellus, margined with somewhat lighter brown, a black spot in cellule 2, an indistinct submarginal and a brown marginal line. Hindwing with black anal spot. Beneath forewing wood-colour, marbled with darker, with 2 black, white-pupilled ocelli, an undulate brown median band, a broad band between the eye-spots and the distal margin and 2 marginal lines likewise brown. The hindwing is more mixed with grey. A broad band traverses the middle. In the marginal area is placed a row of 6 eye-spots, the 2nd and 5th large, the rest small. The 3rd eye-spot has no pupil, the others are all white-pupilled. The broad band behind the middle and the 2 marginal lines are as on the forewing. The ♀ measures 46 mm. and only differs from the ♂ in having the black spots on the upper surface all pupilled with white. From Tamalpais, a mountain in Marin County on the Bay of San Francisco in California. In the collection of the Californian Academy of Sciences. Collected by Behr.

glaucope. **C. glaucope** *Fldr.* (= friedenreichi *Stgr.*) (50d). Above brown with a broad red-yellow band on both wings, in which are placed on the forewing a double ocellus before the apex and a single one in cellule 2, on the hindwing sometimes a black dot in cellule 2. The under surface is lighter and striated with dark brown, on the forewing with the same band and eye-spots as above, but on the hindwing with a narrow, almost straight ochre-yellow stripe, extending from the middle of the costal margin nearly to the anal angle. Behind this stripe are placed on the costal margin 2 dark brown spots. Brazil (provinces of St. Catharina and Parana). — *boenninghauseni.* **boenninghauseni** *Foetterle* (50e) is only a form of *glaucope* in which the distal half of the hindwing beneath is not striated with dark brown and the light yellow median stripe is distally widened. From Itatiaya.

gustavi. **C. gustavi** *Stgr.* (= Satyrus g. aut.) should perhaps be placed here. Above dark smoke-brown with a long light brown macular stripe before the margin, in which are placed on the forewing a black eye-spot before the apex and 1 or 2 small ones above the anal angle and also on the hindwing some black spots. The fringes are a mixture of light and dark grey, chequered with black. On the under surface the forewing is partly blackish, partly brownish grey or light grey with 4 short, streak-like yellow-brown longitudinal stripes. The ocellus in the first of these stripes is larger than on the upper surface. The hindwing beneath is dirty grey with sharply prominent light grey veins. The yellow-brown longitudinal stripes of the upper surface are here only very short. In the Bolivian highlands at 4000 m., discovered by Gust. Garlepp.

20. Genus: **Oeneis** *Hbn.*

The chief distinguishing character of this genus is that none of the veins are swollen, but only the costal of the forewing is much thickened at the base. Otherwise the neuration is similar to that of the preceding genus. The costal margin of the forewing is fairly straight, the cell long and narrow, the apex produced, hence the distal margin rather oblique. The ♂♂ of several species have a stripe of scent-scales behind the median on the upperside of the forewing. The palpus is long, with bristly hairs, the antenna short, with the club gradually thickened. The butterflies are of medium or below the medium size and of yellow, yellow-brown or grey-brown colour, nearly all with the underside of the hindwing light and dark marbled and bearing a dark median band. Their area of distribution embraces the arctic zone and the higher mountains of the temperate zone in the northern hemisphere, both in the Old and the New World. Some species are common to both. Concerning the Old World *Oeneis* cf. vol. I, p. 117—121, pl. 40; also vol. IX, p. 311.

nevadensis. **O. nevadensis** *Fldr.* (= gigas *Btlr.*, californica *Bdv.*) (50 e). The largest and most beautiful species of the genus. Recognizable by the reddish ochre-yellow ground-colour of both wings. The scent-scale stripe of the ♂♂ is very distinct. In the ♂ either 1 or 2 eye-spots are present on the forewing above and beneath. The second of these is placed in cellule 2. In the ♀ there are usually 2 eye-spots, but sometimes 3, the third placed in cellule 3. From California, Oregon, Washington and Vancouver Island. From 2000 to 7000 ft. — *iduna.* **iduna** *Edw.* (50 f) is a somewhat larger and lighter form of *gigas*. The ground-colour is of a much lighter ochre-yellow, especially on the hindwing, and also on the underside of the forewing. The brown striation on the under surface of the hindwing is much finer, so that the white ground-colour stands out much more strongly. The brown dentate lines are thinner and the distal margin narrower. From the coast-districts of northern California. — The egg is irregularly and shallowly ribbed, with pale rings. It hatches in 9 or 10 days. The larva is rosy ochre-yellow, with darker dorsal line and subdorsal stripes, between the two lighter longitudinal lines. On grass. Concerning the pupa nothing is known, as Edwards did not bring the larvae to pupation.

macouni. **O. macouni** *Edw.* This interesting species is quite like *navadensis Fldr.* in size, colouring and markings, but is distinguished from it at once by the complete absence of the large brown scent-scale spot on the upperside of the forewing in the ♂, and further by the presence of a broad dark brown median band on the underside of the hindwing. The species has hitherto been found only in two localities in North America, being rather common at Nepigon on the northern shores of Lake Superior in Canada, from the end of June to the middle of July, in the damp, wooded grass-lands near the river of the same name. The second locality is Morley, Alberta, at the eastern foot of the Rocky Mountains, where the species was found by Macoun. — The larva is figured by Holland and is 35 mm. in length. The head is round with 4 vertical black lines, the body has on the dorsum several narrow dark longitudinal lines, at each side a broad subdorsal stripe and above the legs a dark lateral stripe with a light one above it. It lives on grass.

chryxus. **O. chryxus** *Dbl. & Hew.* (= calais *Scudd.*) (50 f). Similar to *nevadensis*, but smaller, the forewing somewhat more pointed, its costal margin marbled with light and dark, the distal margin in the ♂ consists only of a narrow brown marginal line, the scent-scale spot brownish grey. Forewing in ♂ and ♀ with 2 eye-spots and a small black dot between them, hindwing with a similar anal dot. On the under surface the anterior half of the forewing is finely striated with brown, and also the whole of the hindwing, on which 2 dentate stripes enclose a broad dark median area. — The egg is whitish, the larva grey-brown with dark nebulous lines, the pupa is rounded, anteriorly black-brown, posteriorly yellowish. The butterfly is widely distributed in the Rocky Mountains from Colorado, where it is met with at elevations of 9 000 to 12 000 ft., to the Canadian province of Alberta, where it occurs at from 4000 to 7000 ft. It flies at the end of June and in July. *calais Scudd.*, which was described by the author as coming from Hudson's Bay, is now generally regarded as a synonym of *chryxus*.

ivalida. **O. ivalida** *Mead.* (55 f). This species is easily recognized by the brownish grey colour of the forewing and the whitish grey hindwing. A row of white-grey spots is placed before the distal margin of the forewing, with a small eye-spot before the apex. The under surface is also almost entirely white-grey. The costal margin of the forewing is dotted with brown to the subcostal, then in the anterior part of the cell marbled with brown, some brown streaks extending to the median. The hindwing is striated and marbled with brown with lines about as in *chryxus*. The species appears only to occur in the Californian Sierra Nevada, especially near Lake Tahoe. According to Edwards the egg is distinguished by the somewhat curved ribs on its surface. Concerning larva and pupa nothing is known.

O. norna *Thlg.* (= hilda *Quens.*, celaeno *Hbn.*) (vol. I, pl. 40c). According to Edwards 3 examples of this Palearctic species were found in North Alaska, of which Staudinger had determined one that was sent to him as probably a dark variety of *norna*, the condition of the specimen leaving him in some doubt. *norna* has on a brown ground a broad brownish yellow submarginal band across both wings, in which are placed 1 or more eye-spots. The under surface is rather like that of *chryxus*, but the median band of the hindwing is darker and more strongly dentate. Further observations as to the occurrence of this species in America would thus be desirable. Cf. vol. I, p. 119. *norna.*

O. jutta *Hbn.* (= balder *H. Schäff.*) (50f). Another Palearctic species. The submarginal row of ochre-yellow spots consists on the ♂ forewing of small round spots, in the ♀ of larger oval ones, the number of the black dots in which varies from 1—4 on the forewing and from 1—2 on the hindwing. Beneath the entire hindwing and the apex of the forewing are grey, marbled with brown, the former with a greenish brown, dentate band. — The surface of the egg bears irregular, in part forked, longitudinal ribs. The larva is light yellow-grey with ochreous longitudinal stripes and rows of black dots and small dashes on the dorsum and at the sides. On grass, e. g. (in America) on Iuncus articulata. The pupa is whitish grey, at the abdominal end ochre-yellow. Whilst Holmgren says that in Europe *jutta* settles on pine-trunks, according to Fyles (in America) it always sits on the ground. When pursued it drops into the grass. It flies in June. In North America the species occurs in Maine, Nova Scotia and the Hudson's Bay Territory. In addition it is found in North Europe and North Asia. — **alaskensis** *Holl.* is a form of *jutta* with the wings more thinly scaled and transparent, and the spots on the upper surface more indistinct. On the under surface the wings are uniformly marked with small spots and streaks, so that on the hindwing there is no trace of the darker band of *jutta*. From Alaska. June und July. *jutta.* *alaskensis.*

O. uhleri *Reak.* (50f). Above reddish yellow-brown with dark veins and narrow brown distal margin. Forewing with an eye-spot before the apex and sometimes with 1 or 2 black dots below it. On the hindwing one or several black dots. Beneath the costal margin of the forewing and the entire hindwing are brownish white with a number of brown transverse streaks, which are grouped into several narrow transverse stripes; on the forewing are placed here 1 to 4 black spots, some of them with white pupils, on the hindwing a row of indistinct dots. — The egg is chalk-white, with 19 or 20 longitudinal furrows and with the vertex pitted. It hatches in about 10 days. The adult larva is about an inch long, stout, yellow-brown with grey dorsum and light longitudinal lines. It pupates free, among grass-culms near to the ground; and the pupa is ochre-yellow, darker on the dorsum. The butterfly flies from the end of May until July, in Colorado. — **varuna** *Edw.* (50f), originally described as a separate species, is regarded by most authors as a northern form of *uhleri*, by some even as a synonym. It is smaller, the colouring somewhat duller, the distal margin more broadly brown. On the under surface of the hindwing there is sometimes a dark brown band before the middle. But the number of eye-spots varies as in *uhleri*, Morrison for instance having sent me among several *varuna* from Montana an example with 5 such spots on each surface of the hindwing. — According to Edwards the egg is chalk-white and has 18—20 ribs, some of them incomplete. The larva varies from whitish green to dirty yellow-brown, and is lighter on the back, with 3 rows of small black dashes and slate-grey subdorsal stripe. The pupa is ochre-yellow, the wing-cases light yellow-green. The larva pupates in a sort of cocoon formed in the sand. From Montana, North Dacota and the adjoining parts of Canada. — The preceding notes on the larva, pupa and transformation do not agree well with one another. One might therefore suspect in the two forms two separate species. Further investigations are needed to elucidate the matter. *uhleri.* *varuna.*

O. alberta *Elw.* (50 g). Forewing grey-brown above, in the ♀ strongly dusted with ochre-yellow, with an ochre-yellow submarginal band in which are placed 1—3 black spots or ocelli. Hindwing with the band more distinct, containing 1 eye-spot and 1 or 2 dots. Beneath the forewing is light brown-grey, towards the apex whitish, before this a short dark transverse band. Hindwing the same, with a broad, darker, irregular transverse band across the middle, which is bordered with darker at the margins. — The larva is dark olive-green or greenish slate-coloured with slightly lighter longitudinal stripes, on the back sometimes brown. The pupa is grey-green with dark anterior margin. The butterfly flies on dry, stony slopes, resting on the bare ground. It was discovered at Calgary in the province of Alberta (Canada). It flies in the middle of May. *alberta.*

O. taygete *Hbn.* (= bootes *Bdv.*) (50 g). Above brown, the brownish ochre-yellow submarginal band in the ♂ is only present on the hindwing and in both sexes lacks the black spots. Beneath similar to the figured *alberta* in colouring and markings, but the dark median band on the hindwing is more strongly outcurved in its anterior part, forming an acute angle basewards in the middle. From Labrador. *taygete.*

O. subhyalina *Curt.* (= crambis *Frr.*, also *Möschl.*, oeno *Bdv.*, assimilis *Btlr.*) (50 g). Dirty ochre-yellow to dark brown, mostly with obscure cinnamon-brown or ochre-yellow band and ochre-yellow spots in the cells. *subhyalina.*

Forewing without eye-spots or with 1 or 2 black ones, sometimes white-pupilled, hindwing without ocelli. Hindwing beneath ochre-yellow, marbled with grey and black-brown. Median band darker, bordered at each side by a light grey, sometimes darker band. Veins not dusted with white. Sometimes, however, the marbling *assimilis.* of the hindwing is so much darkened as to obliterate the median band (**assimilis** *Btlr.*). — The egg is similar to that of *jutta*, but the ribs on the surface are finer. The larva is ochreous grey, with darker and lighter longitudinal stripes and rows of black spots. Localities: Newfoundland, Labrador, Alaska. Occurs also in North Asia (cf. vol. I, p. 120, pl. 40 f, under "*crambis*").

semidea. **O. semidea** *Say.* (50 g). The ♂ is unicolorous grey-brown above, the ♀ dark brown with darker marginal line, chequered fringes and small dark brown spots at the margin of the hindwing. The body is black-brown, the club of the antenna red-brown. The forewing beneath is brownish grey, towards the apex marbled with dark brown and whitish grey. The hindwing beneath is brown, marbled with dark brown in the basal and median areas, only the marginal area is marbled with whitish grey and brown, at the distal margin darker-spotted. — The egg is rather irregularly ribbed, grey-white, with silky gloss. The larva light green or yellow-brown with dark transverse shades on each segment and rows of blackish dots at the sides and on the back. Pupa black-brown with yellow-brown abdomen. The butterfly flies on rocky mountains, locally in large numbers, as on the peak of Mt. Washington in New Hampshire, also in Colorado and Labrador.

brucei. **O. brucei** *Edw.* (50 g) approaches *semidea*. It is, however, much more thinly scaled and hence semitransparent. Above like *semidea*, the under surface of the forewing also as in this. But the under surface of the hindwing is much lighter, the basal area has a whitish grey ground-colour, the median band stands out distinctly and the brown lines bordering it are outcurved at the costal margin (which is not the case in *semidea*). — The larva is ochre-yellow, shaded with brownish, with rows of darker dots. Pupa obtuse with the head truncate (much as in *semidea* and *uhleri*, but less than in *jutta*). The butterfly flies on grassy mountain slopes from the end of June to August, local. (Not on rocky peaks like *semidea*.) It is found in Colorado at elevations of 12 to 14000 ft., in the Canadian province of Alberta at 8 to 9000 ft.

beani. **O. beani** *Elw.* Likewise similar to *semidea* and thinly scaled. Above unicolorous light smoke-brown, the costal margin very narrowly light grey, dusted with black. The scent-scale stripe of the ♂♂ indistinct. Beneath the forewing is as above, but the costal margin narrowly and the apex broadly light grey, dusted with dark brown. The hindwing is light grey, densely dusted with black-brown without any trace of a band. Fringes chequered. Palpus entirely black. In the ♀ the hindtibia is thickened and at its extremity curved inwards. Found on rocky peaks near Laggan in Alberta at 8000—9000 ft.

katahdin. **O. katahdin** *Newcomb* (50 g). Above dark-brown, the distal third of the wings yellowish brown with blackish marginal line, fringes chequered with light and dark brown. A small black, white-pupilled spot before the apex of the forewing. Sometimes 3 or 4 such spots are present on the forewing, sometimes again all are absent. The scent-scale spot is faintly visible. Beneath the forewing is as above, but paler, costa and apex dotted with brown. The hindwing beneath has an irregular brown band through the middle, which is at first bordered with black, then with grey. The ♀ has the light brown colouring of the distal margin on the upperside more definite and usually 2 or 3 eye-spots. There is also a row of 5 whitish spots before the distal margin on the underside of the hindwing. The butterfly flies on Mt. Katahdin in Maine at altitudes of 4250—5000 ft., at the end of June.

daura. **O. daura** *Streck.* has been described from a single example, which was taken by MORRISON on Mt. Graham in Arizona. It is similar to the Siberian *fulla Eversm.* (cf. vol. I, p. 119, pl. 40 d), of a whitish ochre-yellow ground-colour (like *ivalida* [50 f]) with an angled brown median line and 3 small black spots, the first pupilled on the forewing. Hindwing at the margin broadly lighter and with a black dot in cellule 2. Fringes chequered. Beneath the hindwing is almost white, very finely and weakly marbled, with a somewhat darker, sharply defined median band. From Arizona.

21. Genus: **Argyrophorus** *Blanch.*

This genus is easily recognized by the dense silver gloss which almost entirely covers the wings above and beneath, or at least the upperside of the forewing. The costal and median are strongly inflated at the base. The upper discocellular of the hindwing is rather short. The wings are broader and less elongated than in *Oeneis*, the distal margin more rounded, the palpus less hairy. The antenna has the club comparatively short and thick. Although the butterflies do not even reach medium size, the first species is one of the most striking insects in the American fauna.

argenteus. **A. argenteus** *Blanch.* (51 a). Above entirely glossy silver-white without markings, fringes brown, body brown with white hairs. Forewing beneath likewise silvery white, the cell dusted with reddish yellow, with a small, round black spot before the apex, which in the ♀ contains a white central dot. Inner margin grey, fringes brown. Hindwing silver-white, basal half dusted with brownish white, with brown spots between, but with all the veins remaining glossy white. Beyond the middle a row of brown spots, before the distal margin a row of brown crescents. The habitat is Chile, where the butterfly is locally common in the Cordilleras of the central provinces and on the Argentine borders in January and February, but is difficult to catch on account of its rapid flight. Only in the early morning it is more easily captured. The altitude at which it occurs is given as between 3000 and 7000 ft.

A. lamna *Thieme* (51 a). Much smaller than the preceding. Forewing above glossy silver-white with rather broad brown-black border, 6—8 mm. in breadth at the apex, 2 mm. at the anal angle. Fringes long and brown. Hindwing entirely brown, towards the base somewhat lighter. Beneath brown, the apex of the forewing and the whole hindwing sprinkled with grey-white atoms and with white longitudinal lines between the veins, on which are placed on the forewing two black dots and on the hindwing a row of 5. Proximally to these on the hindwing several further rows of small dots. From Bolivia. — To a local form of this species I give the name **angusta** *form. nov.* Instead of the broad brown distal margin of the forewing there is here only a narrow brown marginal line and before this a second line, only distinct in the anterior half of the wing. At the apex of the costal margin is placed a narrow brown triangle, its shorter side only occupying 2 mm. of the distal margin. Below this triangle there are 3 brown dots on a silver-white ground, at a distance of about 4 mm. from the distal margin. Fringes brown, spotted with white at the apex. On the under surface both wings have a sharply prominent white marginal line, the veins of the hindwing are likewise white, and the rows of dark dots very distinct. Likewise from Bolivia. *lamna.* *angusta.*

22. Genus: **Cosmosatyrus** *Fldr.*

Club of the antenna thin, moderately excised. Palpus thin, twice as long as the head, upper discocellular of the forewing short. Distal margin rounded, that of the hindwing slightly undulate. This genus was founded by FELDER on *leptoneurodes* and afterwards extended by ELWES.

C. leptoneurodes *Fldr.* (= antarctica *Reed*, germainii *Reed* [explanation of the plate]). Above brown, forewing in the ♂ somewhat dusted with rust-red in the middle, in both sexes an obscure, narrow rust-red submarginal band on the hindwing. On the under surface the forewing is grey-brown, basal and median areas red-brown, before the apex with a round black eye-spot with double white pupil and yellow ring. The hindwing is olive-brown to beyond the middle, then follows a dentate whitish yellow band and in the marginal area a row of 5 eye-spots, those in cellules 2, 5 and 6 black with white pupils and yellow and brown rings, the others, in cellules 3 and 4, white with black ring. At the distal margin is placed a narrow white stripe, which is divided into spots by the dark veins. The butterfly is rather common in the mountains of Chile at elevations of 3000 to 5000 ft. Flies at the end of January and in February. — **plumbeola** *Btlr.* is a local form of *leptoneurodes*, only differing in the presence of a bi-curved brown line on the underside of the forewing, bordering the red-brown median area. From Port Famine on the Straits of Magellan. — **duseni** *Stgr.* is a quite similar form to *plumbeola*, the differences according to ELWES being extremely slight; it was taken on the Rio Aysen in South Chile. *leptoneurodes.* *plumbeola.* *duseni.*

C. chiliensis *Guér.* (= reedii *Btlr.*) (51a). Upper surface in the ♂ unicolorous brown, fringes whitish grey; in the ♀ a round black spot is placed before the apex of the forewing and in its vicinity 4—6 small red-yellow spots. On the under surface the forewing is dark red-yellow to beyond the middle, the distal margin broadly grey, the black spot surrounded with ochre-yellow, hindwing grey-brown, marbled with dark brown and white. The butterfly is common in Chile from November to December and ascends from the coast to elevations of 4000 ft. — **monticolens** *Btlr.* is a form of *chiliensis* which chiefly differs in having a row of 6 black, whitish-bordered spots, placed on a broad brownish white submarginal band on the underside of the hindwing in cellules 1b—6. There are also here on the distal margin large dark brown spots between the entirely white veins. The butterfly is to be found on stony grass-lands in the higher mountain regions of Chile from 4500 to 6000 ft., but is difficult to catch on account of its rapid flight. — **williamsianus** *Btlr.* (= Oeneis antarcticus *Mab.* [according to ELWES]) is a small form belonging here, in which the median band on the underside of the hindwing is curved distally. The light band which follows is broader and instead of the eye-spots of *monticolens* there is here a row of 5 black dots, some of them indistinct. From Port Famine on the Straits of Magellan (*antarcticus Mab.* was discovered at Santa Cruz, a haven on the east coast of Patagonia at 50° south lat.). — **morania** *Berg* is a similar form to *williamsianus*, but has on the underside of the forewing an eye-spot with distinct white pupil, and on the hindwing instead of the row of black dots 2 black, white-pupilled ocelli in light yellow rings. The upper surface is unicolorous brown. It was taken in the interior of Patagonia at the source of the Rio Santa Cruz. — As **sajama** *form. nov.* (50 g) I add a similar form from Bolivia, which is perhaps the northern representative of the Chilian *chiliensis-monticolens*. The upper surface is brown, before the distal margin with a broad light ochre-yellow macular band, composed on the forewing of 6, on the hindwing of 4 spots. The first 3 spots on the forewing are long and narrow, in the 2nd is placed a black spot, the 4th and 5th are broader and long, the 6th also broad, but short. The 4 spots of the hind- *chiliensis.* *monticolens.* *williamsianus.* *morania.* *sajama.*

wing are basally pointed, distally broad. Beneath the forewing is brownish red-yellow, with a black spot before the apex, placed on a light yellow streak. Hindwing beneath similar to that of *williamsianus*, but the broad median band is bipartite, dividing into 2 bands, the outer one distally strongly dentate at the veins. Locality: Sajama in Bolivia. This form was collected by Stübel and in working out his captures I took it at the time for the similar *monticolens*.

milesi. **C. milesi** *Weeks.* Above brown, with a light brown band before the darker margin, occasionally also proximally bordered with dark. Before the apex of the forewing 2 black, white-pupilled ocelli with yellow rings close together, a similar smaller ocellus below them. Hindwing with black submarginal line, without eye-spots. The ocelli on the forewing are occasionally absent, in which case there is merely a black spot before the apex. The under surface is dark brown with slight golden gloss. Two dark lines traverse both wings, one in the middle, the other before the distal margin. The basal half of the forewing is here without markings. On the hindwing all the veins are white, between the 2 lines is placed a row of 4 or 5 elongate white spots, and the basal half of the wing is covered with short dark transverse streaks. From Sicasica in Bolivia.

quies. **C. quies** *Berg.* Above brown with a broad red-yellow band across both wings, reaching to the anal angle, on the forewing distally and proximally dark bordered and bearing before the apex a double eye-spot and in cellule 2 a single one. The middle of the forewing is likewise dusted with red-yellow. Hindwing without ocelli. Beneath the forewing is as above, the red-yellow band proximally somewhat lighter. Hindwing dark grey, striated with brown, with a broad whitish band across the middle. The distal margin of the hindwing is somewhat dentate. The ♀ is similar to the ♂, but the colouring is lighter and the markings weaker. From
plana. Patagonia and the southern part of Argentina. — **plana** *form. nov.* (51 a) is a form nearly agreeing with *quies* beneath, but with the 2 eye-spots on the upper surface placed in ochre-yellow rings, the lower without white pupils, in the middle of the wing with a row of 4 small red-brown spots. In the anterior half of the hindwing is placed an indistinct red-brown band. On the under surface this form differs from *quies* in having the basal half of the forewing reddish brown with 2 brown, angled marks in the cell. In addition the distal margin of the hindwing is almost smooth, while in *quies* it is dentate. From Uruguay.

statia. **C. statia** *spec. nov.* (51 a). Above unicolorous brown, without spots. Beneath grey-brown, the basal area of the forewing red-brown to beyond the middle, before the apex a round black eye-spot with 2 white pupils and an indistinct yellowish ring. Hindwing with 2 strongly curved, dentate dark brown transverse lines across the middle, formed merely of lunules. The ground-colour is grey-brown to the 2nd transverse line, the marginal area lighter and grey, or containing 2 brown spots in brown elongate rings in cellules 2 and 5, a red-brown, dentate submarginal line and a black marginal line. From Chile.

23. Genus: **Tetraphlebia** *Fldr.*

In the forewing the 2nd subcostal vein arises close beyond the end of the cell, the upper discocellular is short, the middle twice as long as the lower; the cells are strongly produced at the posterior end. The club of the antenna is thin, the palpus short and thinly haired. Distal margin of the hindwing rounded.

germainii. **T. germainii** *Fldr.* (= Sat. promaucana *Reed*). Dark brown, beyond the middle of both wings dusted with reddish brown, on the hindwing more weakly than on the forewing. Beneath the base and the costal and distal margins of the forewing are brown, the central area red-brown with brown median band. Before the apex a large black eye-spot with double white pupil and red-yellow ring. The hindwing beneath likewise brown with a broad white band beyond the middle of the wing, running parallel with the distal margin. This band is sharply defined proximally, but ill-defined distally. Rare at Chillan and in the Villacura Valley in Chile at elevations of 3000—4000 ft. According to Reed not rare in the central provinces of Chile.

24. Genus: **Faunula** *Fldr.*

Build almost as in the preceding genus, but the hairs of the palpus are longer and the 2nd subcostal vein of the forewing arises much further from the cell.

leucoglene. **F. leucoglene** *Fldr.* Above brown, the forewing in the ♂ with raised dark scales in the disc, before the distal margin dusted with ferruginous. Beneath but little lighter, before the apex of the forewing a black eye-spot with thick white pupil and 2 dark transverse lines, which unite on median vein 2 and are here dusted with ferruginous. The hindwing brown, faintly spotted with ferruginous. This species has rarely been taken and is confined to high mountains in Chile, namely the Cordilleras at Condes near Santiago at altitudes of between 6 and 10 000 ft. and the pass from Lolco to Lonquimay at 8000 ft. Flies in January.

stelligera. **F. stelligera** *Btlr.* Above brown. Forewing with ferruginous streaks in cellules 2—4. Hindwing with three pointed ferruginous spots in the same cellules. Fringes dark grey. Beneath the basal half of the forewing is ferruginous, the distal half and also the costal and inner margins brown, finely striated with dark. Before the apex a rather large black eye-spot with double white pupil and yellow ring. Hindwing beneath brown, with fine dark striation, a dentate black line behind the cell. Beyond this line the ground-colour is lighter with white rings and a curved row of 7 snow-white spots in black rings. Flies at high altitudes in the mountains of Chile and Argentina (4—7000 ft. Chillan, Lolco, Pulmari, Quillen, St. Martin).

johanna. **F. johanna** *spec. nov.* (51 a). Above brown. Forewing in the ♀ with a double eye-spot before the apex with ochre-yellow ring and 2 white pupils, and with a small blind eye-spot in cellule 2, also with yellow ring. Hindwing above without ocelli. Forewing beneath somewhat lighter than above, the eye-spots placed on a broad, somewhat lighter submarginal band, which is continued on the hindwing also and is proximally bordered by an angled brown line, distally on the forewing by a straight brown line, on the hindwing by one composed of crescents. In this band are placed on the hindwing 5 white dots. From Catamarca in Argentina.

25. Genus: **Neosatyrus** *Wllgr.*

Antenna with gradually thickened, pear-shaped club. Costal and median inflated at the base. Three of the subcostal veins run into the costal, two into the distal margin. The middle discocellular vein is angled.

ambiorix. **N. ambiorix** *Wllgr.* (= minimus *Btlr.*) (51 c). Above brown. Beneath lighter, forewing with red-yellow disc and double eye-spot before the apex, hindwing with a row of 6 white dots, 2 of which are ocellated. Common in Chile to the Argentine border at elevations of from 3000 to 6000 ft. Flies from December to February. From the description and figure I take *minimus Btlr.* to be a small example of *ambiorix.*

simplex. **N. simplex** *Btlr.* (Argyrophenga s.) belongs here according to Elwes. Above unicolorous brown. Beneath the forewing is brick-coloured orange, with dark costal and distal margins and pale brown inner margin; a large black eye-spot before the apex with 2 small white pupils and white ring. Hindwing pale brown with a small orange spot in the cell and a small lunular spot between the radials. The species was found at Chillan in Chile by Edmonds in March and on the road from Lolco to Lonquimay by Elwes in January.

vesagus. **N. vesagus** *Dbl.* (= ochreivittatus *Btlr.*). Above brown, forewing with a large red-yellow spot between the radials. Hindwing unicolorous brown, or with 3 red-yellow spots between the median veins. Forewing beneath rust-coloured with brown margins and a large, round black eye spot with 2 white pupils and red-yellow iris. Hindwing brown with ochreous band across the middle. Chile. — **pusilla** *Fldr.* (Homoeonympha p. = violaceus *Btlr.*) is a form of *vesagus* with a row of whitish yellow dots on the underside of the hindwing. According to Elwes *boisduvalii Blanch.* (51 c) and *hahni Mab.* probably belong here. *pusilla.*

reedii. **N. reedii** *Btlr.* (51 c). Above olive-brown with cupreous gloss and dark margin. Beneath the forewing is tawny orange, before the apex a small black eye-spot with white pupil and orange ring. Hindwing brown, in the middle with a light violet-grey band, which is widened at the costal margin, distal margin striped with brown, basal part of the inner margin blackish. From Chile. — **fuscescens** *Btlr.* is a smaller form of *reedii,* the forewing beneath smoke-brown, with a black dot instead of the eye-spot. From La Union in Valdivia. *fuscescens.*

humilis. **N. humilis** *Fldr.* (= Stygnus h.) (51 f). Above brown, without spots. Beneath lighter, forewing with 2 small black, white-pupilled eye-spots between the radials and the 3rd median vein, hindwing with 4 whitish yellow dots in the marginal area. Chile. Common in woods in Valdivia according to Edmonds, rare at Quillen and at Lake Aluminé according to Elwes.

26. Genus: **Neomaenas** *Wllgr.*

Antennae with spindle-shaped club. Palpus projecting far beyond the head, beneath with long hairs. Wings with the margins entire, hindwing rounded. In the forewing the costal and median are inflated at the base. Differing from *Epinephele* chiefly in the absence of the scent-scale spot on the ♂ forewing.

servilia. **N. servilia** *Wllgr.* (♀ = decorata *Btlr.*) (51 c). Brown, forewing with a red-yellow band beyond the middle, the median area itself also somewhat dusted with red-yellow, a round black spot before the apex. Hindwing with narrow red-yellow submarginal stripe, which in the ♂ is broken up into spots. Beneath the forewing is almost entirely red-yellow with large double eye-spot before the apex. On the hindwing the median band is distally bordered with silver-white. Not rare at Valparaiso and other parts of Chile in February and March.

coenonymphina. **N. coenonymphina** *Btlr.* is similar to *Epin. pales* above, but without the scent-scale spot. Forewing beneath brick-coloured with brown margins and an apical ocellus. Hindwing in the basal half dark brown, bounded by an angled yellow line, disc yellowish with a black, white-pupilled eye-spot. Distal margin brown with dark dentate submarginal line. The ♀ is larger, the disc of both wings above ferruginous; on the under surface the eye-spot of the hindwing is absent. Rare in Valparaiso. December and January.

fractifascia. **N. fractifascia** *Btlr.* Above brown with a red-yellow spot in the middle of the forewing and a black spot in a short red-yellow band before the apex. Hindwing likewise with a short band in which is placed at the anal angle a black spot. Beneath the hindwing is brick-coloured with a brown, dark-margined band, which in the middle is angled and broadly interrupted. In the marginal area 2 black spots at the apex and 2 between the median veins. Rare in the woods near the Baths of Chillan in Chile.

wallengrenii. **N. wallengrenii** *Btlr.* Dark brown, with black apical spot. Forewing beneath yellow-brown with light yellow band and black, white-pupilled eye-spot before the apex. The posterior two-thirds of the hindwing are smoke-brown, divided by a reddish yellow band. Disc lighter, with white veins, distal margin brown. In woods below Chillan in Chile.

inornata. **N. inornata** *Elw.* Dark brown, with a reddish tinge towards the base of both wings, and in the ♀ with a large black-brown spot before the apex of the forewing in an indistinct red-brown ring. On the under surface the forewing is brownish red-yellow with the costal and distal margins yellow-brown. Before the apex a double eye-spot in a yellow ring. Hindwing unicolorous yellow-brown. In the Baños de Cauquenes in Chile, in March.

edmondsii. **N. edmondsii** *Btlr.* (Argyrophenga e.). Above glossy dark brown. Forewing rust-red in the cell, a black spot before the apex. Disc of the hindwing for the most part light rust-coloured with 3 pear-shaped black streaks. On the under surface the forewing is brick-coloured orange with the distal margin grey-brown, before the apex a black ocellus in a yellow ring. Hindwing olive-brown, with a broad sulphur-yellow longitudinal stripe extending from the base across the cell to the distal margin. 6 abbreviated yellow longitudinal stripes are placed on the veins, 2 before and 4 behind the first-mentioned stripe. The costal margin is likewise yellowish, the inner and distal margins grey. Rare, only 1 example in the British Museum, which was taken by Edmonds in the woods below Chillan in Chile.

reticulata. **N. reticulata** *Weym.* (51 c). Above brown. Forewing with 3 small red-yellow spots in cellules 2, 4 and 5 and four white dots before them in a row. On the hindwing a red-yellow band composed of 5 spots, some of which bear a black dot. The last spot at the inner margin has 2 dots. Both wings with white marginal line interrupted at the veins. Fringes brown. As may be seen from the figure the under surface is very characteristically marked. Locality unknown, probably South America. Coll. Weymer.

tenedia. **N. tenedia** *Weym.* (51 c). Above brown. On the forewing a large red-yellow spot covers the cell. A large black spot in an ochre-yellow ring is placed before the apex, sometimes showing 2 white pupils, a small ochre-yellow spot with black central dot in cellule 2, and some red-yellow dots beside it. The hindwing with a short red-yellow band in cellules 4 to 6. On the under surface the basal half of the forewing is entirely red-yellow, the black spot before the apex has 2 white pupils, its distal margin is brownish grey, and the entire hindwing is of this latter colour. From South Brazil.

27. Genus: **Epinephele** *Hbn.*

The antenna has an elongate, gradually thickened club. The costal and median of the forewing are strongly inflated and 2 subcostal veins arise before the end of the cell. The inner margin of the hindwing is more or less excised before the angle and in most species more elongated. The ♂♂ have a stripe of scent-scales on the forewing. Most of the species of this genus belong to the Palearctic fauna. Cf. vol. I, p. 137—142, pl. 46, 47. Some occur in India. Cf. for these *Maniola*, vol. IX, p. 306. The American species only inhabit Chile and the adjoining districts.

limonias. **E. limonias** *Phil.* (= janiroides *Blanch.* [nec *H.-Schäff.*], blanchardii *Kirby*) (51 c). Above brown. Forewing with rust-red central area, which in the ♂ is divided by the dark brown scent-scale spot. In the ♀ the colouring is more red-yellow and a black apical spot is present. The under surface is lighter with distinct apical ocellus. Distributed and common in Chile. As the name *janiroides* had been already employed by Herrich-Schäffer for an *Epinephele* from Algiers it cannot be used for this Chilian species, and hence Kirby chose the name *blanchardii.* But as the description of *limonias Phil.* agrees with this species the latter name *dryas.* must be restored. — **dryas** *Fldr.* (51 c), the figure of which is from Felder's type in the Tring Museum, differs but little from *limonias.* From Chile.

edmondsii. **E. edmondsii** *Btlr.* Above glossy brown. Forewing with the base and a band before the distal margin red-yellow, a row of 6 grey-brown spots across the middle and a black spot before the apex. Hindwing with red-yellow spot before the costal margin. On the under surface the forewing is red-yellow with grey, black-streaked margins and bi-pupilled apical ocellus. Hindwing beneath grey-brown, finely striated with black, with a somewhat darker median band distally margined with black, beside which are placed at the costal margin some white scales. From Chillan on the slopes of the Cordilleras (Chile). Rare.

monachus. **E. monachus** *Blanch.* (= valdiviae *Fldr.*, lugubris *Btlr.*, luctuosus *Reed*) (51 d). Above unicolorous brown, with the fringes chequered with brown and white and an indistinct black spot before the apex of the forewing. Beneath the forewing is for the most part reddish brown, with a blind eye-spot, the hindwing brown, striated with dark brown, with an oblique row of white dots. Very common in the mountains of Chile. The figure is from Felder's type of *valdiviae*.

E. coctei *Guér.* (= tragicus *Reed*) (51 d). Above brown, somewhat dusted with rust-red and with some rust-red spots at the anal angle of the hindwing. The ♀ is rust-reddish to beyond the middle and has before the apex an eye-spot with double pupil. On the under surface the forewing in both sexes is red-yellow with a similar eye-spot, the distal margin and the hindwing lighter brown, the latter with a lighter band beyond the middle. According to Elwes locally common in the Chilian mountains. *coctei.*

E. tristis *Guér.* Somewhat larger than *coctei.* According to the figure in ,,Voyage Coquille" above unicolorous dark yellow-brown with the veins lighter and a small, round, pale yellow spot at the end of the cell on the forewing. On the under surface, which is not figured, according to Guérin's description there is a yellowish white line on the hindwing, anteriorly expanding into a large spot of the same colour. According to Elwes the species is locally common in Chile. *tristis.* — **pales** *Phil.* (51 d). Perhaps a form of the preceding. Above grey-brown with 2 small red-yellow spots at the margin of the hindwing. Forewing beneath red-yellow, costal and inner margins narrowly yellow-grey, distal margin broadly yellow-grey, a large eye-spot with double pupil before the apex. Hindwing beneath yellow-grey with the margin lighter. Chile (Valdivia). *pales.*

E. flora *Phil.* (= Pedal. oaxes *Btlr.*, Stibomorpha tristis *Btlr.*) (51 d). Above brown with 1 or 2 red-brown spots, which, however, may also be absent. Fringes chequered with yellow and brown. Beneath: forewing spotted with red-yellow and brown, its costal margin marbled with black and white. Hindwing marbled with dark brown, with a yellow spot in the middle, an undulate white transverse band and a white spot at the costal margin. Province of Valdivia (Chile). Philippi described the species as a *Satyrus*, Butler first as *Pedaliodes*, then as *Stibomorpha*. On account of the basally inflated median I place it here. *flora.*

E. nycteropus *Reed* (51 d). Above brown, in the ♂ with dark brown scent-scale patch, in the ♀ with dark red-yellow median spot on the forewing. On the hindwing some red-yellow submarginal spots. Forewing beneath red-yellow, distal margin broadly, costal margin narrowly grey-brown, a round apical ocellus with 2 white pupils in ochre-yellow ring. Hindwing grey-brown with a dentate white median stripe. In the middle of the lighter marginal area 2 light yellow spots. Differs also from *flora Phil.*, to which it bears some resemblance, in not having either the fore- or hindwing dentate and in the more produced apex of the forewing. Rare and apparently confined to the coast-region of Central Chile. *nycteropus.*

E. poliozona *Fldr.* (51 d). Above unicolorous brown. Beneath brownish red-yellow with the margins of the forewing grey-brown, a blind apical ocellus, hindwing with a light lilac submarginal band. On this is placed in cellule 2 and in cellule 5 a black dot. Chile. *poliozona.*

E. gyrtone *Berg.* Above brown, the ♂ with a double eye-spot before the apex and without eye-spots on the hindwing. In the ♀ in addition a 2nd small eye-spot in cellule 2 of the forewing and 5 on the hindwing. Beneath yellowish grey, with a lighter band before the distal margin, partly white on the hindwing, on which are placed the black, white-pupilled and yellow-ringed ocelli, in the ♂ 2 on the forewing and 4 on the hindwing, in the ♀ 3 on the forewing and 5 on the hindwing. The first eye-spot on the forewing is larger and bi-pupilled. The band is proximally and distally bordered by a dark line. 39—45 mm. Found in the south of the province of Buenos Aires (Sierra Tandil). *gyrtone.*

E. imbrialis *Weeks.* Above bronze-brown. On the forewing a dentate dark brown line runs from the apex to the submedian and from there back, touching the discocellular, to the middle of the costal margin. In the triangle thus formed is placed before the apex a black double eye-spot with 2 silvery pupils and light brown ring. The hindwing has a fine dark brown submarginal line and only occasionally a small eye-spot with single pupil at the anal angle. The under surface of the forewing is as above, only much lighter, the eye-spot is larger and has a yellowish white ring. The apex is dusted with grey. The hindwing is grey beneath, strongly dusted with brown, with a broad grey band, proximally bordered with brown, before the distal margin. Sometimes a row of brown spots is present in the middle. Thus the species is apparently very variable. From Bolivia. Alezuni district. *imbrialis.*

28. Genus: **Erebia** *Dalm.*

Only the costal of the forewing is strongly inflated at the base. Of the subcostal veins 2 usually arise before the end of the cell, sometimes only one. The 4th subcostal vein runs into the apex of the forewing. The antenna has the club distinctly prolonged. The palpus is anteriorly clothed with long, stiff hairs, above with shorter hairs. The distal margin of both wings is rounded. The Erebias are mostly small dark brown butterflies, scarcely reaching medium size. Their range of distribution embraces the whole Palearctic and Nearctic Region. They are mostly mountain butterflies, inhabiting the alpine regions of Europe, Asia and America. Only a few species descend to the hills. In comparison with the Palearctic Region the number of the American species is small. For the habits and life-history of *Erebia* cf. further vol. I, p. 94 and 95.

discoidalis. **E. discoidalis** *Kirby* (51 e). Above dark brown, the distal half of the forewing red-brown, the two colours shading into one another; an obscure black eye-spot with whitish pupil before the apex. Beneath the forewing is red-brown, the margins striated with dark brown. Basal half of the hindwing brown, distal half grey, the whole with darker striation. From Hudson's Bay. Also occurs in Siberia, cf. vol. I, p. 111.

fasciata. **E. fasciata** *Btlr.* (vol. I, pl. 35 e). Above brown, forewing distally red-brown as in *discoidalis.* Beneath the forewing is rust-coloured, whitish at the apex, with 3 brown bands, namely a basal, a median and a marginal. The median band is undulate and at the costa broader; all these are bordered with rust-colour. Hindwing whitish grey, with 3 similar, but red-brown bands, the middle one dentate at both sides. 51—58 mm. Localities: arctic North America, East Siberia. Cf. vol. I, p. 103.

rossii. **E. rossii** *Curt.* Dark brown, with the fringes somewhat lighter. Forewing before the apex with red-brown spot, in which are placed 2 black dots. Sometimes below these 2 smaller red-brown spots, each with a black dot. On the hindwing sometimes three similar spots with indistinct dots. Beneath the forewing is red-brown with dark brown margins and sometimes with white-pupilled eye-spots. Hindwing dark brown, dusted with whitish grey, with obscure darker median band, before the discocellular a white spot and beyond it, before the distal margin, 2 or 3 white dots. Localities: arctic North America and Siberia. Cf. vol. I, p. 109.

mancinus. E. *disa Thnb.* **mancinus** *Dbl.* (51 e). Above brown. Forewing with a red-brown band before the distal margin, composed of 4 spots placed close together. Each spot contains a black dot, mostly with white centre. Fringes chequered with brown and white. Hindwing unicolorous brown. Beneath somewhat lighter, the apex of the forewing and the distal margin of the hindwing dusted with grey. The band of the forewing is broken up into 4 separate red-yellow spots, only the first 2 still connected, the black dots in them larger than above. This butterfly is found in the mountains of Alaska and British Columbia. On the type-form *disa* cf. vol. I, p. 109, pl. 37 h.

vidleri. **E. vidleri** *Edw.* This species is near the Siberian *sedakovii Ev.* (cf. vol. I, p. 105, pl. 37 e), resembling it in size, colour and markings; but according to ELWES the difference in the genitalia is so great that the two species cannot be regarded as identical. The band on the upperside of the forewing is yellowish brown and runs straight across the wing, enclosing three small dark brown eye-spots, of which the first 2 have white pupils. The band of the hindwing is shorter than in *sedakovii*, only reaching the middle of the wing and containing only 2 brown spots, the upper very small. On the under surface the band of the forewing does not reach the costal and the one on the hindwing is very similar to that of *aethiops* (vol. I, pl. 37 e) or *sedakovii.* Found by Capt. VIDLER in the mountains beyond Lake Seton at Lilloet on the Fraser River, British Columbia. Also occurs in Washington (according to DYAR).

callias. **E. callias** *Edw.* (51 f). Above brown, before the apex of the forewing with a red-brown spot, in which are placed 2 small, white-pupilled ocelli. Beneath the forewing is red-brown with the costal and distal margins grey and with the eye-spots as above. Hindwing grey, finely striated with brown, with several dark transverse stripes. Common on high mountains in Colorado and New Mexico. It is the American form of the Palearctic *tyndarus Esp.* (cf. vol. I, p. 113, pl. 37 i).

epipsodea. **E. epipsodea** *Btlr.* (= rhodia *Edw.*) (51 e). Above brown with 4 or 5 black, white-pupilled eye-spots on the forewing and 3 or 4 on the hindwing, all broadly surrounded with red-brown. Beneath the eye-spots are exactly as above and the hindwing has a broad, curved blackish median band. — The egg is suboval, chalk-white. The larva stout, cylindrical, with rounded head, and of a dull yellow-green colour; the pupa is brownish white, spotted with brown. The butterfly appears in 10 days. It is common in the mountains of British Columbia and its range extends from New Mexico in the south, where it flies in high-lying districts, *brucei.* to Alaska in the north. — **brucei** *Elw.* (= sineocellata *Skinn.*) is a smaller form of *epipsodea*, with the eye-spots absent and the red-brown macular band almost obsolete. It occurs on high mountain peaks in Colorado at altitudes of 12000 ft.

sofia. **E. sofia** *Streck.* (♀ = ethela *Edw.*) (51 e). Above dark brown, forewing with a smooth-edged submarginal band of 6 red-brown spots, hindwing with 5 similar spots, of which the last 2 are more isolated. On the under surface the forewing is red-brown in the middle, the band is as above, but the first 3 spots are light yellow, the last 3 red-yellow. The hindwing has a white spot in the cell and 3 whitish spots at the apex, below them 2 white dots. The butterfly is still rare in collections and has been found at Fort Churchill in British *alaskensis.* North America, in the Yellow-stone National Park and some other localities in Colorado. — **alaskensis** *Holl.* is a form of *sofia* with fewer spots on the wings. The forewing shows only 3 on each surface, the hindwing only 2 on the underside. In Eagle City and at American Creek in Alaska, taken in July.

youngi. **E. youngi** *Holl.* Above velvety dark brown, forewing with a short submarginal band composed of red-brown spots. Each spot contains a black dot. The hindwing has a similar row of spots, but more isolated. The under surface is paler. On the forewing the band is somewhat more continuous even than above. Across the middle of the hindwing runs a broad, curved dark band, bordered with black at both sides, to which follow a grey and then at the distal margin a dark brown band. The black dots of the upper surface are here only faintly indicated. The ♀ is somewhat lighter above than the ♂, beneath somewhat more sharply marked. 33—35 mm. From Alaska.

magdalena. **E. magdalena** *Streck.* (51 e). Upper and under surface of both wings unicolorous black-brown, without markings. Has hitherto been found only in Colorado at altitudes of from 10 to 14000 ft.

patagonica. **E. patagonica** *Mab.* (51 e). Above dark brown with a brownish red submarginal band on both wings, which, however, does not reach the costal and inner margins. Beneath the forewing is red-brown with black veins and a small black, white-pupilled eye-spot before the apex. Hindwing brown, striated with dark brown, through the middle a dark brown dentate line, accompanied distally by a narrow light brownish band; two black, white-pupilled ocelli in cellules 2 and 3. From Patagonia.

29. Genus: **Manerebia** *Stgr.*

Antenna thinner and shorter than in *Erebia*, the club but little thickened and scarcely hollowed out. Wings above without markings. Forewing beneath with an eye-spot above the anal angle or some white dots before the distal margin. The hindwing has a curved, dark transverse line in the basal part and 2 others, undulate or dentate, before the distal margin, with light dots or small eye-spots between them. From Bolivia and Peru.

cyclopina. **M. cyclopina** *Stgr.* (= Lyman. varola *Schaus*) (51 f). Above uniform black-brown, beneath somewhat lighter, the apex of the forewing sprinkled with light grey, with a black, white-pupilled and brownish-margined eye-spot in cellule 2 and sometimes a smaller eye-spot above or below it; further with 2 or 3 white dots before the apex, a dentate dark transverse line before the margin and an indistinct line before the eye-spots. Hindwing brown-grey, at the margin sprinkled with grey and with 3 dark transverse lines, a larger yellow-ringed eye-spot and a smaller one below it before the anal angle. Towards the apex 1—3 white dots. From Peru and Bolivia. — Whether **cyclopella** *Stgr.* (51 f) *cyclopella.* is a seasonal form of the preceding or a separate species is not yet settled. It differs in having the 2nd and 3rd transverse lines on the underside of the hindwing nearer together and the eye-spot almost entirely yellow. From Bolivia. Equally uncertain is the specific right of **cyclops** *Stgr.*, *cyclops.* in which the hindwing above is not sprinkled with grey at the distal margin and which further differs from the other forms in having the band between the 2nd and 3rd transverse lines on the underside of the forewing much constricted. From southern Bolivia (Bueyes).

typhlops. **M. typhlops** *Stgr.* Above dark black-brown. Beneath more brownish with 2 weakly dentate dark brown transverse lines before the distal margin of both wings, between which are placed some white dots. The number of these dots varies on the forewing from 3 to 7, on the hindwing from 2 to 5. 34—35 mm. From the province of Yungas in Bolivia. — **thyphlopsella** *Stgr.* *thyphlopsella.* is a form which only differs in its smaller size (28—29 mm.) and in having the under surface, particularly that of the hindwing, suffused with much lighter grey. From Tanampaya in Bolivia.

30. Genus: **Idioneura** *Fldr.*

Forewing rather elongate, its distal margin rounded, only the costal vein inflated at the base, the middle discocellular of the forewing straight, the lower proximally angled, these two veins form in the hindwing almost a straight line. The eyes are naked. Only one Colombian species.

erebioides. **I. erebioides** *Fldr.* (51 f). The brown colour of the upper surface becomes darker towards the base. The fringes are grey. On the hindwing above are placed in cellules 3 to 5 three distinct black, white-pupilled ocelli in red-yellow rings. The under surface is somewhat lighter brown. Across the middle of both wings runs a dark brown dentate transverse line and before the distal margin are placed 2 smooth lines. On the hindwing in cellules 2—4 three short white longitudinal streaks, which are pointed at both ends. From Bogotá (Colombia), 2500 m. As **moderata** *form. nov.* *moderata.* I add a form of *ereboides* which has only one eye-spot on the upperside of the hindwing, in cellule 3, and the white longitudinal streaks on the under surface entirely absent. From Bogotá.

31. Genus: **Pseudomaniola** *Weym.*

The costal of the forewing is strongly, the median more weakly inflated; the 2nd branch of the subcostal arises far beyond the end of the cell, the middle discocellular of the forewing is semicircularly incurved, the lower nearly straight. In the hindwing the middle discocellular is slightly incurved. The palpus is densely covered with long hairs, the antenna short, with broad, sharply defined, shovel-shaped club. The two species occur at great altitudes in the Bolivian highlands.

euripides. **P. euripides** *Weym.* (51 f). Above light brown, distally with greenish reflection. On the forewing a broad ochreous band, in which are placed before the apex 2 brown spots and below them sometimes 2 further brown dots. The hindwing has 3 large red-yellow spots in cellules 2—4. On the under surface the ground-colour is darker brown, without the greenish reflection, the band red-yellow, the 2 larger black spots white-pupilled, joined together and surrounded by a broad light yellow ring. The hindwing is irrorated with dark brown, with broad, lighter border occupying a third of the wing. A dark brown band separates the two colours. Before the distal margin in cellule 2 a dark brown, white-centred spot. At Portaguelo de Corocoro and Sicasica at 3600 to 4600 m. (Collected by Stübel).

eleates. **P. eleates** *Weym.* Above brown, with two small red-yellow spots on each wing placed in cellules 2 and 3 not far from the distal margin, on the forewing distinct, on the hindwing more indistinct. Beneath likewise brown. Forewing with black, white-pupilled eye-spot before the apex, surrounded by a light brown ring which is posteriorly prolonged into cellule 3. The border of the hindwing is yellowish brown, occupying a quarter of the wing, and contains a row of brown crescents. Only one example (a ♂) was collected by Stübel, at Tacora in Bolivia; this is now in the Zool. Museum in Berlin.

32. Genus: **Calisto** *Hbn.*

This genus differs from all the other American Satyrid genera in that all the subcostal veins of the forewing arise beyond the end of the cell. The costal and median of the forewing are strongly inflated. The middle discocellular of the forewing forms a right angle, the posterior arm extending far distad, so that the cell is much longer posteriorly than anteriorly. The inner margin of the hindwing is more or less deeply excised before the inner angle. In most species the ♂♂ have a silky scent-scale spot on the upper surface. The butterflies are mostly small or below medium size. They inhabit the Antilles; a single species is said to be found on the continent of America, but this seems to need confirmation.

zangis. **C. zangis** *F.* (= agnes *Cr.*) (51 f). Above brown, forewing in the ♂♂ with a large, round, velvety dark brown scent-scale spot in the middle. The hindwing is reddish brown in the posterior half, with a small black spot at the anal angle. Under surface brown, forewing with a large eye-spot before the apex near the costal margin. This is black with ochre-yellow ring and double white pupil. On the hindwing a much smaller eye-spot before the anal angle. The distal half of the hindwing is lighter brown. The butterfly is common on Jamaica, both in the plains and the mountains, where it ascends to 6000 ft. One example was taken according to Lathy in Demerara, British Guiana. The further localities which have been given, "Pennsylvania" in Cramer (Uitl. Kap.) and "Carolina" in Godart (Encyclopédie) and in Kirby's Catalogue are in all probability erroneous, as Holland and Dyar do not cite the species in their works.

nubila. **C. nubila** *Lathy* (51 f) is quite similar to the preceding species, but differs in the absence of the velvety scent-scale spot of the ♂♂. The upper surface is entirely blackish brown, distally paler, with a black spot at the anal angle of the hindwing. On the under surface the cell of the forewing is bright red-brown, the hindwing likewise red-brown, at the anal angle orange-coloured, with a larger eye-spot in cellule 2, which is of an orange colour, and some small white spots beside it. The ♀ is not known. From Porto Rico.

archebates. **C. archebates** *Mén.* Above cupreous brown, with a velvety spot on the forewing extending from the inner margin to the cell. Beneath brown. Forewing with black, white-pupilled, yellow-ringed ocellus, hindwing with light yellow band across the middle, which is widened at the inner margin. Behind this an eye-spot, like that on the forewing, and two white dots beside it. From Haiti. Very rare. Only in the collection of Godman and Salvin and in the St. Petersburg Museum.

pulchella. **C. pulchella** *Lathy* (51 g). Above dark brown, in the ♂ with the velvety spot on the forewing as in the other species and a black spot at the anal angle, bordered with light yellow. The ♀ has on the hindwing a large orange-brown spot in the posterior part of the distal margin before the anal angle, traversed by a dark brown line. The under surface is similar to those of *zangis* and *nubila*, but the basal half of the hindwing is almost entirely reddish orange, before the eye-spot on the hindwing there are 3 white dots in a row, one above another, and behind it a row of red-yellow spots. On the forewing the 2nd white pupil of the eye-spot
tenebrosa. is removed basad and placed in the yellow ring. From Haiti. **tenebrosa** *Lathy* is a female form of *pulchella* in which the large orange-brown area before the anal angle on the upperside of the hindwing is absent. Likewise from Haiti.

herophile. **C. herophile** *Hbn.* (51 f). Above brown, in the ♂ with a dark velvety spot on the forewing. Beneath grey-brown with 2 undulate median and 2 broad, finely dentate submarginal lines, a red-yellow triangle at the base of the forewing, with a large eye-spot on the forewing and a somewhat smaller one on the hindwing and before the latter a row of 4 white dots. From Cuba.

hysius. **C. hysius** *Godt.* The smallest species of the genus, with an expanse of only 24—28 mm. Above dark brown, in the ♂♂ with large, velvety blackish spot on the forewing. Beneath brown, forewing irrorated with ochre-yellow, with the cell filled up with brick-red, a brown median line, distally margined with yellow, 2 submarginal *confusa.* lines and a large yellow-ringed apical ocellus with double pupil. Hindwing brown, densely sprinkled with ochre-yellow. In addition to the 3 transverse lines of the forewing a further transverse line is also present near the base. A small eye-spot in cellule 2 and above it two white dots. From Haiti. Also occurring in Jamaica, according to an example in coll. STAUDINGER. — **confusa** *Lathy* (= lysius *Mén.*) (51 g) is a form of *hysius* which differs above in having a small ochre-yellow spot placed at the anal angle of the hindwing. On the under surface the yellow transverse line before the eye-spot of the forewing only extends to vein 2. The two brown transverse lines before and in the middle of the hindwing are distally distinctly bordered with white, the two brown submarginal lines terminate at the anal angle in a black spot and the space between them is filled up with white in the posterior part of the wing. The eye-spot of the hindwing is also somewhat larger than in *hysius*. From Haiti.

33. Genus: **Steroma** *Westw.*

A genus easy to recognize by the shape of the wings. The distal margin of the forewing is weakly, that of the hindwing between the veins strongly excised. Below the apex of the forewing the distal margin projects obtusely. The inner margin of the hindwing is deeply excised before the inner angle, so that the angle itself is produced into a lobe. The costal margin of the hindwing is likewise deeply excised in the middle and then forms at ⅔ of its length a broad, rounded tooth, which is covered by the inner margin of the forewing. The costal and median of the forewing are strongly, the submedian somewhat less strongly inflated at the base. One subcostal vein arises before the end of the cell of the forewing. The ♂ has on the forewing a velvety scent-scale spot. The butterflies occur in the high mountains of tropical America.

superba. **S. superba** *Btlr.* (51 g). Above black-brown, at the margin reddish, the ♂ with a large silky scent-scale spot in the middle of the forewing. Beneath the forewing is glossy copper-brown, at the apex marbled with dark brown. The whole hindwing similarly marbled. At the costa of the hindwing is placed a silvery spot, in the middle another and before the distal margin a row of ochre-yellow dots. From Bolivia and Peru.

bega. *andensis.* *modesta.* **S. bega** *Westw.* Similar to the preceding species, but the wings are shorter, the form consequently more compact. Above dark brown. Beneath the forewing is lighter, unicolorous brown, only the apex is irrorated with black and white. Hindwing marbled with light and dark brown, sprinkled with silvery white dots and spots. From Venezuela, Colombia and Bolivia. — **andensis** *Fldr.* (51 g) is a form of *bega* in which the 2 short silvery stripes on the underside of the hindwing form at the costa the letter V. From Bogotá (Colombia). — **modesta** *form. nov.* (51 g) is a somewhat smaller form, with the silvery white dots and markings on the underside of the hindwing almost entirely absent. Only a silvery dot in cellule 2 and a small silvery angled mark in cellule 3 persist. The tooth at the costal margin of the hindwing is as in the other forms. From Yungas de la Paz, 1000 m. (Bolivia).

zibia. **S. zibia** *Btlr.* Above brown with dark margin, distal area of the hindwing reddish, dusted with white at the anal angle. Beneath the forewing is lighter, with a yellow streak before the apex, the costa marbled with yellow and brown. Hindwing black, marbled with brown and rust-colour, the apical area ochreous with 2 rust-coloured spots, a silver spot before the apex and the spots at the costa as in *bega*, two black spots with silvery margins before the distal margin. Expanse 42 mm. From Venezuela.

34. Genus: **Pseudosteroma** *gen. nov.*

This new genus forms a transition between *Steroma* and *Steremnia*. As in the latter it lacks the broad, obtuse tooth which *Steroma* has at ⅔ of the costal margin on the hindwing, but the other teeth, at the distal margin, project quite as far as in the latter genus. The first tooth is somewhat stronger than the rest and forms almost a right angle at the apex. The inner margin of the hindwing is quite as strongly excised as in *Steroma* and the distal margin of the forewing forms the same obtuse angle below the apex. The scent-scale spot is likewise mostly present.

pronophila. *umbracina.* **P. pronophila** *Fldr.* (Steroma p.) (51 g). Above brown, the distal margin and the scent-scale spot beyond the median of the forewing darker; the tips of the fringes between the veins whitish. Beneath the forewing yellowish brown, apex of the forewing and the whole hindwing marbled with dark brown. The latter with a white spot at the costal margin, a row of 6 white dots before the distal margin and a light brown spot at the anal angle. The ♀ is marked like the ♂ except that the scent-scale spot is absent. Colombia (Bogotá), 2800 m., Cipaque in the eastern Cordillera, 3000 m., found by FASSL at the Quindiu Pass at an altitude of 3800 m. — **umbracina** *Btlr.* is a form of *pronophila*, above olive-brown, apical third of the forewing somewhat lighter, the fringes alternately black and yellow-brown. Beneath almost as above, hindwing grey-brown at the apex, with an undulate, interrupted, dark brown submarginal line. Expanse 40 mm. From Peru.

monachella. **P. monachella** *spec. nov.* (*Thieme i. l.*) (52 a). Above dark brown, in the middle darker, at the distal margin lighter. Fringes dark brown, chequered with white. Beneath the basal half of the forewing reddish brown, distally lighter. Distal border 1½ mm. in breadth, finely striated with dark brown and before the apex powdered with white. Hindwing dark olive-brown, marbled and spotted with black, distal area lighter with a strongly dentate olive-brown submarginal band, a row of white dots before it, and some whitish yellow spots and streaks at the costal margin and anal angle. The distal margin is entirely dark brown. From Huancabamba, North Peru, at 3000 m.

agraulis. **P. agraulis** *spec. nov.* (51 f). ♂: above reddish brown, somewhat glossy, at the base somewhat darker. Forewing with 3 white dots before the distal margin in cellules 3, 4 and 5. Fringes white, spotted with black on the veins. Hindwing with 4 white dots in cellules 2 to 5. Marginal lines dark brown, fringes unicolorous brown. Forewing beneath brown, apex and distal margin white, irrorated with dark brown. The white dots of the upper surface are likewise present. Hindwing beneath dark grey, marbled with white and black, at the costal margin 2 broken white spots, at the inner margin 2 triangular grey spots, before the distal margin a row of white dots in black rings. Fringes brown. Differing from *monachella* in the absence of the dark brown scale-spot in the middle of the forewing above, the different shape of the markings on the hindwing beneath and especially in the absence of the dark black-grey border. Moreover the incisions in the distal margin are deeper and the teeth more pointed. From Bolivia.

35. Genus: **Steremnia** *Thieme.*

This genus lacks not only the teeth beyond the middle of the costal margin of the hindwing which *Steroma* possesses, but also the one placed at the apex itself, which projects rectangularly in *Pseudosteroma*. Hence the somewhat convex costal margin of the hindwing passes into the distal margin in almost an even curve. The excision of the inner margin is not so deep and the teeth of the distal margin project less than in the two preceding genera.

polyxo. **S. polyxo** *Godm. & Salv.* Above brown, in the ♂ unicolorous, in the ♀ with an obscure reddish brown submarginal band on both wings. Beneath the forewing brown, with yellowish brown apex. Hindwing yellowish brown, striated with dark brown, with a yellowish band before the middle, which is anteriorly widened and cleft into two. Before the distal margin a broad yellowish band, which in the posterior half of the wing projects widely proximad in 2 teeth, forming the letter W. Collected in the Sierra Nevada of Santa Marta (Colombia) by SIMONS and TETENS.

rugilas. **S. rugilas** *Thieme* (52 a). Above brown; on the forewing somewhat reddish before the middle of the distal margin. Forewing beneath reddish brown with grey apex, hindwing black-brown marbled with light, with indistinct white median band, arising from a white costal spot, and a row of white dots before the somewhat lighter distal margin. Colombia, Callegos on the Quindiu Pass at an elevation of 3000 m. (FASSL).

misella. **S. misella** *Thieme* (52 a). Above olive-brown, towards the margin somewhat lighter, the ♂ with scale-spot. Fringes of both wings chequered with brown and white. Beneath dark brown, at the distal margin of the hindwing and the apex of the forewing somewhat lighter and finely striated with dark, with an indistinct submarginal line. The teeth of the hindwing project but little. From Huancabamba in North Peru.

36. Genus: **Gyrocheilus** *Btlr.*

Costa of the forewing strongly curved, distal margin but little undulate, that of the hindwing dentate, inner margin of the hindwing rather strongly excised. The costal vein of the forewing is rather strongly swollen. Of the subcostal veins of the forewing the first arises before the end of the cell, the 2nd just at its anterior angle, the rest behind it. The middle discocellular vein on both wings is angularly bent inwards, consequently the posterior part of the cell is longer than the anterior. Medium-sized, dark brown butterflies, inhabiting Mexico and the neighbouring state of Arizona.

patrobas. **G. patrobas** *Hew.* (52 b). Above dark brown, forewing with 4 white dots in a row, fringes chequered with black and white. Hindwing with a broad red-brown submarginal band, on the proximal edge of which stand 2 white dots in cellules 2 and 3, and with a narrow, somewhat obscure red-brown stripe between this band and the distal margin. Beneath the wings are even darker brown than above. On the forewing the apex is powdered with white and the white dots are placed in black rings. On the hindwing the distal margin is broadly bluish grey, marbled with red-yellow and brown, at its proximal side is placed a row of whitish yellow spots, at its distal side several brown lines separated by red-yellow ones. In the highlands of Mexico
tritonia. (Oaxaca, North Sonora, Durangocity, Jalapa). — The form **tritonia** *Edw.* only differs in its darker upper surface, the infuscated red-brown band of the hindwing and the absence of the white dots in this band. On the forewing above and beneath there are sometimes only 3 white dots instead of 4. From Arizona and North Mexico.

37. Genus: **Elina** *Blanch.*

In this genus 2 subcostal veins arise before the end of the cell on the forewing, the rest beyond it. The costal and median of this wing are inflated at the base. The distal margin of the forewing is undulate, that of the hindwing strongly dentate and its inner margin excised. The genus consists of medium-sized and small butterflies, and occurs in Chile and the adjoining and neighbouring countries.

E. lefebvrei *Guér.* (= montrolii *Feisth.*) (52 b). Above brown with a red-brown submarginal band which is strongly constricted in places and on the forewing interrupted by the brown veins. Before the apex of the forewing are placed on this band some ochreous longitudinal rays and 2 dark brown spots. There are sometimes also a small brown spot in cellule 2 and a brown spot in the same cellule of the hindwing. The basal and median areas are strongly dusted with red-brown. On the under surface the forewing is rust-brown to the submarginal band, the band ochre-yellow, anteriorly white, the 3 dark spots black with white pupils. The distal margin is brown. Across the middle of the hindwing runs a dentate dark brown band, basally blurred, distally as a rule sharply defined. Then follows a grey-white submarginal band sprinkled with brown and then the dark brown distal margin. The ♀ is considerably larger, having an expanse of 70 mm. The basal half of both wings is almost entirely red-brown, the anterior dark spot has a white centre and the under surface is lighter than in the ♂. — The larva is light brown with black longitudinal lines. Head large, with 2 black lines and a light spiracular line, bordered with black beneath; the dorsum is somewhat darker brown, the anal extremity with 2 points. It is full-grown in October and lives on "Coligne" (Chusquea sp. ?). The pupa is light brown with some black streaks and spots. The butterfly appears in November and December and is locally common in Chile, but more in the plains than in the mountains. It occurs also in Argentina and Uruguay. *lefebvrei.*

E. vanessoides *Blanch.* (52 b). Similar to the preceding species, but somewhat smaller. The hindwing is elongate and less dentate. The band is lighter and the dark brown spots in cellule 2 are absent on both wings above and on the forewing beneath. The dark brown spots before the apex of the forewing have no white pupils on either surface. Hindwing marbled with light and dark brown, crossed by a curved white stripe, interrupted on vein 5. Beyond this a submarginal band, which is somewhat lighter than the ground-colour and bears in cellule 2 a dark brown spot with red-yellow ring. From Valdivia in Chile, where it is not rare. *vanessoides.*

E. calvertii *Elw.* A small species with the distal margin of the forewing straight. The ♂ above dark brown, with 2 small, obscure red-brown submarginal spots in cellules 2 and 3 on both wings. Beneath the forewing is brown, at the base dark red-yellow to the middle, with a broad, straight red-yellow submarginal band, in which is placed before the apex a round black spot with ochre-yellow ring. The hindwing is marbled with light and dark brown, with a large white spot at the apex, strongly sprinkled with brown; a row of white dots is placed before the distal margin. The ♀ shows an increase in the number of the red-brown spots on the upper surface, on the forewing brown dots are placed in these spots and the eye-spot of the under surface shows through above. On the underside of the hindwing the white spot at the apex forms the beginning of an ochre-yellow band, irrorated with brown, which is continued to the inner margin. The distal margin of the hindwing is only slightly undulate in the ♀. The ♂ has on the upperside of the hindwing a spot of velvety scales. Not rare in a wood below the Baños of Chillan in Chile, in December. Also found at Lake Quillen in Argentina (Elwes). *calvertii.*

E. nemyrioides *Blanch.* (= nemyroides *Reed*, neomyrioides *Elw.*) (52 b). The distal margin of the forewing before the apex produced into an obtuse angle, in the ♂ somewhat more than in the ♀. Otherwise very similar to the preceding species; the ♂ has the same spot of velvety dark brown scales in the middle of the forewing. Beyond this spot the ground-colour is strongly mixed with red-brown. The under surface, which is here figured, is very similarly marked to that of *calvertii*, but the white spot at the costal margin of the hindwing is purer white in *nemyrioides* and is continued as a dentate white line to the inner angle. In the ♂ the red-brown band on the underside of the forewing occurs also on the upperside in the same breadth and encloses here likewise a round black apical spot. The hindwing in the ♀ has on the upper surface a submarginal row of small red-yellow spots and on the under surface the white spot at the costal margin is much larger. From Chile, at the Baths of Chillan and in Valdivia (according to Edmonds), at San Ignacio and Port Blest (according to Elwes). Not common in the Central Provinces, but less rare in Valdivia (Reed). Flies January to March. *nemyrioides.*

38. Genus: **Eteona** *Westw.*

The shape of the wings is about the same as in *Elina*, the distal margin of the forewing is undulate and has below the apex an obtuse angle, that of the hindwing is dentate, but the inner margin of the latter is not excised. Only the costal of the forewing is inflated, the other veins are normal. In the ♀ 2 of the subcostal veins of the forewing arise before the end of the cell, the rest behind it; in the ♂ on the other hand only one before the end of the cell, whilst the 2nd arises exactly at the angle. The butterflies inhabit South Brazil.

E. tisiphone *Bdv.* (Euterpe t.) (52 a). Above dark brown with a row of yellowish white spots across both wings, covering the greater part of the hindwing, but on the forewing mostly obsolescent in the ♂. Single ♂♂ have the forewing above entirely black-brown. On the under surface the ground-colour is lighter, the veins black, and between them are placed black longitudinal rays and short white longitudinal streaks. The macular band is pure white and in the ♂ also extends to the costal margin of the forewing. The spots are individually smaller, but their number is larger in both sexes than above. The butterfly is distributed in South Brazil *tisiphone.*

from Rio de Janeiro to Rio Grande do Sul, but also occurs (according to Staudinger) in Colombia. Boisduval in his ,,Species Général" gave Chile as locality. Butler and Elwes, however, do not mention the species in their lists of the Chilian butterflies, and Reed expressly says in his ,,Mariposas Chilenas" that it is not Chilian.

vulpecula. **vulpecula** *Weym.* (52 a) is a female form of *tisiphone* in which the macular band on the upperside is not yellowish white but ferruginous red-brown. The cell of the forewing is also reddish brown. Only some small spots before the apex of the forewing remain light yellow. The under surface is entirely brownish ochreous, which colour has absorbed all the white spots and rays, only the black veins, spots and longitudinal rays between the veins being still present. From Rio Grande do Sul.

eupolis. **E. eupolis** *Hew.* (52 a, b). Forewing above brown with red-yellow longitudinal stripes at the base, a sulphur-yellow band beyond the middle and a spot of the same colour before the apex. Hindwing red-yellow with broad brown distal margin. Beneath as above, but lighter, the apex of the forewing with black longitudinal lines, the hindwing with white, black-edged longitudinal rays between the veins in the marginal area. *flava.* From Rio de Janeiro and Esperito Santo. — As **flava** *form. nov.* I introduce a form of *eupolis* in which the red-yellow colour of the forewing above and beneath is replaced by sulphur-yellow and the greater part of the hindwing is lemon-yellow; of the red-yellow colour of *eupolis* only a stripe about 4 mm. in breadth beside the brown distal margin remains. Beneath the lemon-yellow ground-colour of the hindwing extends nearly to the termen, the brown border being absent, but the black lines and veins, as well as the white, black-edged longitudinal rays, are as in *eupolis.* From Esperito Santo.

39. Genus: **Zabirnia** *Hew.*

Size and shape of *Catagramma.* Head small. Eyes naked. Palpus long and thin, twice as long as the head, covered with long hairs. Antenna less than half the length of the forewing, with long club. Forewing: costal and distal margins convex. Inner margin straight. Costal strongly swollen at the base and reaching to the middle of the costal margin. Two subcostal veins arise before the end of the cell, which is somewhat more than half the length of the wing. The upper discocellular is short, the middle forms an angle inwards. The distal margin of the hindwing is semicircular, the cell less than half the length of the wing.

zigomala. **Z. zigomala** *Hew.* Above dark brown. Basal half of the forewing reddish orange with the veins black. Beneath as above, but lighter brown, the distal half of the forewing and the whole of the hindwing, with all the veins and the lines between them black, on the forewing 2 ochre-yellow spots at the costal margin beyond the middle and a round black spot between the 1st and 2nd median vein. The hindwing has beyond the middle an indistinct band, somewhat lighter than the ground-colour, running parallel with the distal margin. 54 mm. From Jima in Ecuador. Coll. Hewitson (Brit. Mus.).

40. Genus: **Sabatoga** *Stgr.*

Apex of the forewing produced, not pointed but rounded, the inner angle on the contrary strongly rounded off, the costal margin nearly straight, hence the forewing is comparatively narrow. Only one subcostal vein arises before the end of the cell, subcostal vein 4 runs into the costal margin immediately before the apex. Hindwing with an obtuse angle in the middle of the distal margin. The rest of the neuration of this wing is as in *Idioneura*; the cell is distally as strongly rounded as in that genus. Palpus long, with long hairs. Antenna thin with the club strongly thickened. Eyes naked.

mirabilis. **S. mirabilis** *Stgr.* ♂: forewing brown-black with a large, transparent white inner-marginal spot and a small elongate subapical one. Hindwing whitish, inner margin, base and costal margin densely dusted with dark brown-grey; only the apical half is pure white, with a row of black spots (which, however, may also be absent). Beneath the forewing is dirty white, with the apical area red-brown or dull yellow-brown. Hindwing brown, towards the inner margin grey, on the median vein, the three median branches and the lower radial are placed silvery stripes, some of which are bordered with brown. 5 black dots between the veins. Only 2 examples of the species are known, in coll. Staudinger (now in the Zool. Museum in Berlin). They came from the Thalenhorst collection at Hamburg and bear the locality-label: Sabatoga in Colombia.

41. Genus: **Lymanopoda** *Westw.*

Palpus long, with long, stiff, erect hairs, only the dorsal surface and the terminal joint short-haired. Antenna with the club gradually thickened. A special distinguishing mark of the genus is that the forelegs of the male are very much aborted. Eyes slightly hairy. In the forewing the costal is inflated at the base, the median only slightly thickened, the submedian not at all. Two subcostal veins arise before the end of the cell and the 4th subcostal runs into the costal margin before the apex. The upper discocellular is short, the middle and lower vary in the different species. Sometimes the middle, sometimes the lower, forms a proximally directed angle, from which arises a small vein running into the cell. Occasionally, however, this veinlet is placed at the point where the two veins meet, thus forming a continuation of the lower radial. The hindwing of several species shows a similar recurrent veinlet, its position varying as in the forewing. — The genus is composed of small or quite moderate-sized butterflies, mostly with rounded wings. Only the apex of the forewing is in several species almost squared, in single cases even pointed. Others have an obtuse angle in the middle of the distal margin of the hindwing, while in others again it is placed at the anal angle of the hindwing. The upper surface is mostly unicolorous brown, only a few species having the ground-colour white or glossy blue. Frequently white dots are placed in a curved row on both wings, occasionally these are replaced by eye-spots. Single species have silvery spots or bands on the underside of the hindwing. The head-quarters of this genus are the Andes of tropical western America, where it is distributed from Costa Rica to Peru.

Upper surface white.

L. lactea *Hew.* White, base dusted with darker; forewing: costal and distal margins reddish, a black *lactea.* submarginal stripe, also a spot in the middle of the costal margin, a large quadrate spot at the apex and a small, round, white-centred spot between the 2nd and 3rd median veins, all black. On the hindwing the veins are black towards the distal margin; 2 black dots in cellules 4 and 5 and one in cellule 1 c. Beneath white, the margins of the forewing and the whole of the hindwing light yellow. The spots on the forewing are in part indistinct. The hindwing is traversed by 2 oblique red-brown bands, on the lower of these bands are placed 3 black dots, a black dot at the apex and 3 further dots in the posterior half of the wing. Expanse 40 mm. From Colombia.

L. galactea *Stgr.* (52 c). Slightly glossy white. Forewing with the costal margin narrowly black and *galactea.* with a broad black distal border, decreasing but little in breadth posteriorly and reaching to the first median vein. In this are placed several white dots. Hindwing with black spot in the anterior part of the distal margin. On the under surface the terminal band is shorter and its distal half is brownish. The white dots are here bordered with black. The underside of the hindwing is crossed by 3 brown transverse stripes which show through slightly above. From Cillutincara (province of Yungas, Bolivia). Collected by Garlepp.

L. eubagioides *Btlr.* Similar to the preceding. White, at the base blackish green, costa, apex and *eubagioides.* distal margin of the forewing narrowly ferruginous, the space before the apex from the costa to the first median vein black. The distal half of the cell and 2 spots in cellules 2 and 3 are also black. In the black apical area are placed a semicircular spot at the end of the cell, an oblique band midway between cell and apex and 4 small dots before the apex, all white. Beneath white, the forewing with red-brown disc, spotted with white; costa, apex and distal margin pale ochre-yellow. Two dark spots in cellules 2 and 3, the upper with white centre and ochre-yellow ring. Hindwing dirty white, dusted with brown, with a number of oblique brown streaks in the basal area and 7 black dots in the distal area. 43 mm. From Peru.

L. nivea *Stgr.* (52 c). Forewing white, with black costal and distal margins, the former narrow, the latter *nivea.* anteriorly broad, posteriorly narrow; four white dots in a curved row before the apex, a black spot on the discocellular. Hindwing white, only the base dusted with grey. Beneath the costal margin and apex of the forewing are dusted with yellowish grey. From Ecuador (Quito). — **melia** *form. nov.* (52 c) is a form of *nivea* *melia.* in which the black spot on the discocellular of the forewing is joined to the black distal margin, so that the distal half of the forewing is black to the middle of the costal margin and to the inner angle, and only interrupted by one larger and 2 or 3 small white spots. The hindwing is dusted with darker at the base. On the underside of the forewing before the apex are placed 3 brown dots in the positions where *nivea* has white ones and a 4th brown dot in cellule 3. In the ♀ the apex of the forewing and the whole hindwing are dusted with yellowish grey beneath. Collected by Fassl at the Quindiu Pass in Colombia at 3800 m. in September to November. — **sororcula** *Thieme* is a further form of *nivea*; markings on the upper surface not black but bright *sororcula.* rust-brown, only the spot at the end of the cell and the distal margin somewhat darkened, the narrow border at the costal margin rust-yellow. From Ecuador, environs of Chimborazo (Haensch).

L. huilana *Weym.* (52 c). The white ground-colour of the upper surface is much darkened in the basal *huilana.* half of the forewing by dark brown dusting. The apical half is black-brown extending into the cell and to the inner angle and proximally forming several projecting angles. In it is placed in cellules 4—6 a dull white macular band. In the middle of cellule 2 there is a dark brown spot on white ground. The hindwing is almost entirely covered with brown dusting, so that only in the middle somewhat of the white ground-colour remains. The basal area has white hairs. A row of brown dots before the margin. On the under surface the costal margin, apex and distal margin of the forewing are brownish ochre with the same row of dots as above. Collected by Stübel on the Paramo des Huila in Colombia at 4000 m. — **tolima** *form. nov.* (52 c) is a form of *huilana* *tolima.* in which the forewing is less dark-dusted, so that there is a large white area in the middle, extending from the anterior margin of the cell to the anal angle. The round dark brown spot in cellule 2 is as in *huilana.* The dark dusting of the entire hindwing is on the contrary so strong as to produce a bluish grey colouring, only interrupted by a white longitudinal ray. The underside of the forewing is as in *huilana*, that of the hindwing is light brownish yellow with the same white longitudinal ray as on the upper surface but here posteriorly bordered with dark brown. The row of dots as above. On the Paramo des Tolima in Colombia, 4200 m., found in January by Fassl.

palumba. **L. palumba** *Thieme.* Somewhat smaller than the preceding forms. Forewing white with black-brown apex, costal and distal bordering. The dark costal border embraces the whole cell, extends broadly to the apex and then at the distal margin obliquely recedes nearly to the inner angle without proximal teeth. At the base this margin is glossy slate-green, before the apex ferruginous, otherwise black-brown. A white spot at the end of the cell, a somewhat larger one above it and 3 or 4 white dots before the apex. Hindwing entirely white, at the base with slate-green reflection. The under surface is whitish yellow, clouded with rust-brown dusting, and with a rust-brown spot in the cell of the forewing. From Bolivia (province of Yungas de la Paz).

Upper surface blue.

samius. **L. samius** *Dbl.* (52 c). The most beautiful species of the genus. Above glossy blue with black-brown distal margin, which gradually decreases in breadth from the costal margin of the forewing to the inner angle of the hindwing and on the forewing encloses glossy blue spots and white dots. The hindwing is bordered with a row of black dots. Under surface bright ochre-yellow, on the forewing with 3 or 4 small black, white-pupilled eye-spots and some white dots before the apex, corresponding in position with the white dots of the upper surface. On the hindwing are placed a curved row of black dots and a dentate brown submarginal line. Two brownish transverse stripes run from the basal half of the inner margin to the apex. The ♀ is lighter and less glossy blue above. The inner margin of the hindwing is dusted with brownish grey as far as the median. Sometimes the blue colour is changed into a delicate red. According to Fassl the egg is nearly as large as that of *Pap. machaon*, but pear-shaped, broader above than beneath, somewhat constricted in the middle, reddish grey, with a silky gloss, and with narrow longitudinal ribs, terminating above in a dark elevation. The larva is still unknown; the foodplant is probably the wild mountain sugar-cane (Chusque), near which Fassl mostly took the butterflies. Bogotá (Colombia) on the mountains bordering the plateau, at altitudes of 2800 to 3200 m. On account of its rapid flight the butterfly is difficult to catch.

caeruleata. **L. caeruleata** *Godm. & Salv.* Above similar to the preceding species, but beneath quite different. The black distal margin of the glossy blue upper surface is somewhat broader, the blue spots in it are absent, only the white dots being present above. On the underside the forewing is brown at the base, the central area broadly black with blue spots and white dots, the apex and distal margin light ochre-yellow. The hindwing is entirely ochre-yellow, at the base dusted with brownish, with 2 brownish transverse stripes in the basal half, a brown, dentate submarginal line and a row of 7 dark brown dots. From the Sierra Nevada, Santa Marta, Colombia (Simons).

Upper surface brown.

cinna. **L. cinna** *Godm. & Salv.* Above brown, forewing with a curved row of 6 white dots. Hindwing with the base blue, this colour extending along the inner margin to the anal angle. Beneath the forewing is reddish brown, at the distal margin lighter. The white dots are as above, but all placed in black rings, and on the discocellular there is a light, black-margined patch. The hindwing is somewhat lighter reddish brown and bears beyond the middle an obscure row of round brown spots with white central dots. Before and behind this row of spots a dentate brown transverse line. From Guatemala, San Lucas Toliman near the Lake of Atitlan, taken by Champion at an elevation of 5000 ft. Only one example, in coll. Godman and Salvin.

marianna. **L. marianna** *Stgr.* (52 d). Above black-brown. Forewing with 3 white dots before the apex, hindwing with large golden green inner-marginal spot. Beneath the forewing is chestnut-brown, with the apex brownish yellow, and before it 3 white dots, 2 black, white-pupilled eye-spots between the median veins. Hindwing beneath brownish yellow with 2 brown and 2 white-grey transverse bands, as well as 4 or 5 black dots with white centres. From the mountains of Merida (Venezuela).

labda. **L. labda** *Hew.* (52 d). ♂: above unicolorous dark brown. Beneath reddish brown. Forewing with 5 silver-white dots in an interrupted row before the distal margin, the last 2 in black rings. Hindwing with 2 transverse rows of silvery spots and with several small silvery spots and dots between them and at the anal angle. The ♀ was discovered by Fassl and is very different from the ♂. It has on the upperside of the forewing 5 white dots, 3 before the apex near the distal margin and 2 further removed from the margin between the median veins. The hindwing is unicolorous brown. Beneath the forewing is yellowish brown to two-thirds of its length, the distal margin ochre-yellow. Instead of 2 eye-spots there are here 3 before the inner angle. The white dots before the apex are larger than in the ♂. The hindwing has no trace of silvery spots. It is yellowish white-grey, with the base dusted with light brownish yellow and with 2 transverse stripes of the same colour, one placed just behind the cell, the other before the distal margin. Localities: Colombia and Ecuador. The ♀ was found by FASSL on the Quindiu Pass at Machiu at 2500 m.

lebbaea. **L. lebbaea** *Fldr.* (52 d) is somewhat similar to the preceding species, but the forewing is more pointed with the distal margin nearly straight. On the under surface the hindwing and the apex of the forewing are not red-brown but brownish ochre. The silvery spots on the hindwing are much reduced in number. Of the first silvery transverse band only the large spot at the end of the cell is present. The 4 spots of the 2nd transverse band are smaller, the last spot in particular indistinct. Several of the other silver dots are also absent. From Bogotá (Colombia). The figure is from FELDER's type in the Tring Museum.

ferruginosa. **L. ferruginosa** *Btlr.* Similar to *labda*, but with the apex of the forewing more rounded and the inner margin shorter. The distal margin of the hindwing is somewhat prominent in the middle. Above brown, forewing with a white dot before the apex and another in the disc. On the under surface of the hindwing all the larger discal spots are not silvery, as in *labda*, but orange, only the spot before the discocellular is yellowish silvery. From Bolivia. — *translucida.* **translucida** *Stgr. i. l.* is a form of *ferruginosa* in which the reddish yellow macular bands of the under surface of the hindwing show through weakly on the upperside also. On the upperside of the forewing is placed before the apex a short, indistinct red-yellow band, and beside it proximally 1, distally 3 white dots. Beneath the distal half of the forewing is bright ochre-yellow with 2 black, white-pupilled eye-spots between the median veins. From Bolivia. — *hyagnis.* **hyagnis** *form. nov.* (52 d) is a form with 3 or 4 white dots before the apex and in the marginal area on the dark brown upper surface of the forewing. Beneath the basal half of the forewing is light brown, the distal part ochre-yellow, with 2 dark brown, white-pupilled eye-spots and 2 brown spots beyond them between the median veins and with several white spots and dots before the apex. The hindwing is light ochre-yellow, finely dusted with brown, with several brown spots and broken transverse bands. At the posterior end of the cell is placed the silvery spot which is common to all forms of *ferruginosa*. Bolivia. — *rana.* **rana** *form. nov.* (*Thieme i. l.*) (52 d). Likewise a form of *ferruginosa*, with the underside of the forewing reddish brown and characterized by a broad dark brown submarginal band, in which 2 white dots are placed between the median veins. A white patch stands before the apex and beside it 3 white dots near the distal margin. The hindwing has the ground-colour likewise red-brown and 3 dark red-brown transverse stripes between the middle and the distal margin. Five white dots in a curved row and the silver spot at the end of the cell stand out distinctly. From Huancabamba in North Peru.

jonius. **L. jonius** *Westw.* (52 e). The apex of the forewing forms a right angle. Above brown with 4 white dots in cellules 3—6, the middle 2 placed nearest to the distal margin. Fringes grey. Beneath the base and the costal and distal margins of the forewing are brownish ochre, the middle red-brown, distally darker, with 5 white dots. The underside of the hindwing is brownish red-yellow with 3 oblique, dentate brown lines and a row of black dots. The ♀ is more reddish brown above, the hindwing finely margined with reddish yellow at the inner margin. The forewing has 5 white dots on both surfaces. On the under surface the apex of the forewing and the whole hindwing are light yellowish grey. Instead of the dentate lines of the ♂ there are in the ♀ obscure bands formed of brownish dusting. From Chipaque in the Colombian East Cordillera (3000 m.), where also the ♀ was found by FASSL. Flies in April.

excisa. **L. excisa** *spec. nov.* (52 f). The distal margin of the forewing is slightly excised below the apex, hence the apex is prominent, especially in the ♀. Above brown, forewing with 5 white dots, placed in a very sinuous row. Hindwing without markings. Beneath the forewing is red-brown; before the distal margin a black-brown band, on which are placed 5 or 6 white dots. Hindwing olive-brown with 3 dark brown, almost horizontal stripes and a row of black dots between the 2nd and 3rd. ♀ considerably larger, with the distal margin of the forewing rounded in the middle. The ground-colour of the forewing is reddish brown above, the dots as in the ♂. The hindwing has the inner margin ferruginous brown for a breadth of 1½ mm. The fringes are grey-brown. Beneath the forewing is light red-brown with dark brown spots and bands. The white dots as in the ♂. The hindwing unicolorous yellow-brown with a narrow, oblique brown stripe across the middle. Colombia (Quindiu-Pass, 3500—3800 m., Monte Socorro, 3600 m.). Discovered by FASSL. Flies in July and September.

obsoleta. **L. obsoleta** *Westw.* (= larunda *Hopff.*) (52 e). The hindwing is obtusely angled in the middle of the distal margin. Above brown with 2 white dots, one above the other, before the apex of the forewing. Beneath likewise brown with the same 2 white dots and below them 2 black eye-spots with white pupils, the first placed proximally. Hindwing reddish brown, with 2 lilac transverse bands, partly interrupted by rust-red colour, finely dusted with brown all over, with a strongly curved row of 5 to 7 white dots, often bordered with black. The ♀ of this species occurs in 2 forms, which differ not only in the markings but also in shape, one agreeing with the ♂, while the other approaches *gortyna*. The first form (52 e) has the distal margin of the forewing more strongly rounded, but the hindwing has the same obtuse angle as the ♂. On the upperside of the forewing are placed four white dots, two in cellules 4 and 5 near the distal margin and two in cellules 2 and 3 more proximally. The first dot is somewhat larger and transparent. On the under surface of the forewing the 2 eye-spots are as in the ♂, but broadly margined with red-yellow, and the light bands of the hindwing are broader and reddish grey-brown. This form was taken by FASSL at the Quindiu Pass, 2500 m., in West Colombia in Sep-

gortynoides. tember. The other form of the ♀, which I call **gortynoides** *form. nov.*, has been already briefly mentioned by Thieme in the Berliner Entom. Zeitschr., vol. 50, p. 70. It resembles *Lym. gortyna*, but is smaller (expanse 50 mm.), the hindwing not round but bent or obtusely angled at the distal margin and the row of eye-spots on the hindwing not present beneath. Thieme possessed this form from Bogotá, Merida and Bolivia. Fassl has now also met with it flying together with ♂♂ of *obsoleta-larunda* in the Colombian East Cordillera. These ♀♀ have the same strongly undulate hindwing that Thieme mentions, but the eye-spots on the underside of the hindwing are not absent but are present in cellules 1 c to 5 (in cellule 1 c there are two), and although some of them are small those in cellules 2 and 3 are distinct, and all have white pupils. The upper surface is dark brown. Forewing with 2 large ocelli between the median veins, bordered with red-yellow and with white pupils; sometimes also a somewhat smaller, blind eye-spot below them in the inner angle. Two very small, indistinct ocelli before the apex. On the hindwing are placed 5 round black spots in red-yellow rings, in a curved row, only the last of which has a white pupil. The ground-colour of the under surface is yellowish grey-brown, finely striated with dark brown, towards the base darker. Forewing with the same markings as the upper surface, but with the bordering of the eye-spots lighter. Hindwing variable as regards the eye-spots, as already mentioned above. *obsoleta* (*larunda*) occurs in Colombia, Venezuela, Peru and Bolivia. — My grounds for employing the name *obsoleta* for this species which is known in Germany under the name *larunda* are as follows: Hopffer says at the conclusion of his description (Stettin. Ent. Zeit. 1874, p. 361): "Differs from all the species known to me in the distinctly angled hindwing." Thus he has overlooked the fact that the figure of the upper surface of *obsoleta* in the ,,Genera Diurnal Lepidoptera" shows just these angles and also agrees with *larunda* in the shape of the forewing, as well as the colouring and markings. Unfortunately the author of the above work gives neither a description nor a figure of the under surface. But I am indebted to Mr. Kirby of London for a description of the underside of *obsoleta* drawn up from the type in the Brit. Museum and fully agreeing with *larunda* ♂.

gortyna. **L. gortyna** *Weym.* (53 a). Of this species only the ♀ is known; it is similar to the 2nd form of the ♀ of *obsoleta* (*larunda*) and to that of *albocincta*. It is, however, larger than either. Ground-colour of the upper surface brown, distally lighter. On the forewing there are 5 eye-spots, of which the 3rd and 4th are placed more proximally and are much larger than the rest. The hindwing has a proximally curved row of 5 small, white-pupilled eye-spots. On the under surface the wing is finely striated with dark brown to the base, the eye-spots on both wings are as above, except that the 2 larger on the forewing are bordered with ochre-yellow and the smaller, at the anal angle, is absent. The hindwing has a somewhat lighter submarginal band. From Paramo de Guasco (2500 m.), Colombia (Stübel).

levana. **L. levana** *Godm.* (51 b). Forewing with the apex pointed, but not sharply, distal margin nearly straight. Upper surface dark brown, both wings with a small black, white-pupilled eye-spot in cellule 2 and one or two black dots above it. Forewing beneath as above, but the distal margin ferruginous, anteriorly broad, posteriorly narrow. Hindwing likewise ferruginous, with a strongly dentate ochre-yellow band. Chapmero near Bogotá, 2800 m. (Fassl). Flies in September.

apiculata. **L. apiculata** *Fldr.* (53 a, misprinted *apiciculata*). Shape of the preceding species, but the apex of the forewing somewhat sharper and the distal margin slightly excised below the apex. Above dark brown, distally somewhat lighter, without markings. Beneath likewise dark brown; forewing with a fine, dentate dark brown submarginal line, which is followed by grey dusting to the distal margin, proximally broadly dusted with yellowish. Beside this a row of white dots. Hindwing with broad grey-brown distal margin, also with a row of white dots at its proximal side and traversed by a dark brown dentate submarginal line. In the middle of the hindwing a row of yellowish brown spots. Colombia (Bogotá [Lindig], Boqueron de Cipaque in the Colombian East Cordillera, 3200 m.). Flies in January (Fassl). — *curvilinea.* **curvilinea** *form. nov.* is a form of *apiculata* which has on the underside of the hindwing a somewhat outcurved white line instead of the row of yellowish brown spots. This line traverses the whole wing from ⅔ of the costal to ⅔ of the inner margin. Boqueron de Cipaque, 3200 m., Colombian East Cordillera (Fassl).

altis. **L. altis** *Weym.* (52 f). The apex of the forewing is rectangular, the hindwing rather obtusely angled at vein 4 and its distal margin somewhat undulate. Above brown; the basal half of both wings somewhat lighter brown. Beneath lighter brown. The apex of the forewing occupied by a red-brown triangle, at the proximal edge of which are placed several white dots. Between the median veins 2 black, white-pupilled eye-spots in red-yellow bordering. Across the middle of the hindwing runs a straight white band, irregularly defined at the edges, from the costal to the inner margin, including the apex of the cell. Beyond this a row of white dots. Colombia (Paramo de Aponte, 2800 m.) (Stübel), Ecuador.

leaena. **L. leaena** *Hew.* (52 f). Above dark brown; distally reddish brown. Forewing beneath as above, but with a submarginal row of white dots. Hindwing beneath brown with a straight, light yellow band through the middle and a row of white dots beyond it. Distal margin dusted with grey. The ♀ differs from the ♂ only in having a small, triangular white spot on the upper surface at the apex of the hindwing, which marks the beginning of the light band of the under surface. Colombia, eastern slopes of the Cordillera of Bogotá, 2000—2500 m., Parano de Aponte, 2800 m. (STÜBEL), Quindiu Pass, 3800 m. (FASSL), Ecuador: Quito (STÜBEL). — **lanassa** *lanassa.* *Fldr.* (52 f) is a form of *leaena* with somewhat broader wings, in which the white dots are absent on the underside of both wings and the light yellow band is narrower. Before the margin of the forewing there is a dentate brown line on the under surface. Bogotá. — **satura** *form. nov.* (52 f). Likewise a form of *leaena*, *satura.* on the under surface of which the posterior white dot of the forewing and also the first two and the last two dots on the hindwing are replaced by eye-spots. These are black with white pupils and yellow rings. Before the distal margin a dark brown dentate line. Sometimes the eye-spots are very small and indistinct. Cuzco, 2—3000 m. (Peru), Quindiu Pass, 2400 m. (Colombia, FASSL).

L. lisa *spec. nov.* (52 f). An easily recognized species. Above brown with a red-yellow band beyond *lisa.* the middle of the hindwing, which in the anterior half is narrow and indistinct, but in the posterior half gradually increases in breadth and at the inner angle extends along the distal margin. On the under surface the forewing is unicolorous dark brown; the hindwing likewise dark brown with a straight, light reddish yellow band, occupying the same position as above, anteriorly 1 mm., posteriorly 2 mm. in breadth, sharply defined at both sides and proximally bordered by a white line. Beyond this 2 fine white dots in cellules 2 and 3, and before the distal margin a brown undulate line. South-East Peru.

L. albocincta *Hew.* (52 c). ♂: above unicolorous brown. Beneath reddish brown, forewing with 1 or 2, *albocincta.* occasionally 3 white dots, which, however, may also be entirely absent. Hindwing finely striated with dark brown, with a fairly straight white band, which is interrupted by the brown veins. The very different ♀ (52 c) was discovered by FASSL. It is similar to *gortyna* and *gortynoides* and is distinguished by the large black eye-spots, with white pupils and red-yellow rings, on the upperside of the forewing between the median veins. In cellules 4 and 5, nearer to the distal margin are placed 2 small black rings with white centres. Hindwing without markings. Beneath the forewing is brown, costal and distal margins brownish grey, irrorated with dark brown, the large eye-spots as above; the small eye-spots replaced by white dots. Hindwing brownish grey, irrorated with dark brown, with lighter submarginal band. From the Rio Vitaco, 2500 m., West Cordilleras (Colombia).

L. albomaculata *Hew.* (52 g). Above brown. Beneath reddish brown, forewing with a straight row *albomaculata.* of white dots, hindwing with a curved row of 7 nearly round white spots. Sometimes some white dots are present also on the upperside of the forewing. Colombia, Rio Pongo in Bolivia. — **affineola** *Stgr. i. l.* (52 g) *affineola.* is a form of *albomaculata* in which the first three white spots on the underside of the hindwing are rather large, but the other 4 very small and punctiform, so that the row appears much more strongly curved. Sometimes the first and third spots are also very small. On the under surface of the forewing the two posterior white dots are placed in black rings and removed somewhat proximad. On the upper surface there are on the forewing 3 white dots, on the hindwing one. Cuzco in Peru, Bolivia. — **apulia** *Hopff.*, a further form of *albomaculata*, *apulia.* differs in having the white macular band on the underside of the hindwing running straight across the disc like a string of pearls. The separate spots are round, of uniform size and placed rather close together. On the upperside of the forewing are 3 red-yellow submarginal spots and on the hindwing a red-yellow subapical spot. From Bolivia.

L. maso *Godm.* is aberrant in shape. The apex of the forewing is truncate, the distal margin conse- *maso.* quently projecting in an obtuse angle, that of the hindwing is dentate and forms a right angle at the 3rd median vein. The upper surface is unicolorous brown. Beneath likewise brown, apex of the forewing and inner margin of the hindwing dusted with lilac. Forewing with an almost straight submarginal row of 6 white dots. Hindwing with an excurved row of 6 or 7 white spots, with yellow central dots. 48 mm. From Colombia (Frontino in Antioquia).

L. villarresi *Dogn.* has the distal margin of the forewing rounded. That of the hindwing is somewhat *villarresi.* undulate with the inner angle obtuse. The upper surface is unicolorous brown, the under surface likewise brown, at the distal margin lighter, with a short row of 2 or 3 white spots not far from the apex, near the costal margin. 48 mm. From Loja in Ecuador.

L. euopis *Godm. & Salv.* Distal margin of both wings rounded. ♂: above brown. Forewing with 5 *euopis.* black, white-pupilled eye-spots in a curved row before the distal margin. Hindwing in the middle with a row of 5 black, non-pupilled spots. Beneath ferruginous, the eye-spots of the forewing as above and placed in an ochre-yellow band bordered with dark brown. On the hindwing a row of small eye-spots is present instead of the spots. In the ♀ the eye-spots on the upperside of the forewing are placed in a broad, strongly curved ochre-yellow submarginal band. The distal half of the hindwing is entirely ochre-yellow, only a narrow distal and inner margin and the row of spots are brown. The under surface in the ♀ is light brownish ochre-yellow, darker towards the base; the markings of the forewing as in the ♂, the hindwing with only a row of brown dots. Found by ROGERS at the Volcan de Irazu and Cache in Costa Rica. Rare.

L. panacea *Hew.* (52 g). Above unicolorous brown. Beneath reddish brown, margin of the forewing *panacea.* and the whole hindwing with undulate dark brown markings. Forewing with 2 black, white-pupilled eye-spots and a white dot above them. Hindwing with a row of small black dots, some of which have white pupils. The ♀ is reddish brown above, distally paler, with 4 eye-spots which have light reddish rings and white pupils, the 2 placed before the apex being smaller. From Ecuador (Huamboya, Riobamba). — *venusia.* **venusia** *Hopff.* (52 g) is a form of *panacea* in which the white dots on the underside are silvery and more numerous. The black dots of the hindwing all have silver-white pupils. From Peru. — *marica.* **marica** *Stgr.* (53 a), likewise a form of *panacea*, differs in the ♂ having on the upperside of the forewing 2 distinct black eye-spots between the median veins and sometimes single eye-spots also on the hindwing above. Cuzco (Peru). — *caucana.* **caucana** *form. nov.* (52 g), a further *panacea* form, has both above and beneath 3 white dots in an oblique row before the apex of the forewing. On the under surface the apex as far as these dots is bright light rust-brown, which colour is continued along the distal margin to the inner angle. The rest of the forewing is dark black-brown with 2 or 3 white dots in cellules 1 b, 2 and 3. The hindwing is dark rust-brown with a curved row of 4 or 5 obscure black dots with white pupils. Cauca Valley (Colombia).

cillutinarca. **L. cillutinarca** *spec. nov.* (*Stgr. i. l.*) (53 a). Above unicolorous reddish brown, distally somewhat lighter. Beneath the same, on each wing with a row of 4 or 5 white dots, running parallel with the distal margin, some of them placed in fine black rings. A fine dark brown dentate line near the distal margin on both wings. From the Mapiri (Bolivia).

venosa. **L. venosa** *Btlr.* (52 g). Above brown. Forewing in the middle of the distal margin obscurely dusted with brownish red-yellow. Beneath there are 3 red-yellow spots at this place. The hindwing is somewhat lighter brown beneath, with the veins dark brown. Peru, Bolivia.

acraeida. **L. acraeida** *Btlr.* (Trophonina a. *Röb.*) (52 g). Above reddish brown with a row of 6 red-yellow spots before the distal margin of the forewing, posteriorly becoming smaller and nearer to the margin. Beneath the ground-colour of the forewing is somewhat lighter brown, the red-yellow macular band is as above, the space between this band and the distal margin is yellow-brown, intersected by the dark brown veins and interneural longitudinal lines. The yellow-brown colour is continued along the costal margin to the base. The hindwing is entirely yellow-brown beneath with the veins and interneural longitudinal lines dark brown. The markings of the under surface mimic those of the Acraeids. ♀ dimorphic, the basal half of the forewing pale reddish, that of the hindwing of a leaden hue, distal half of both wings yellow-brown. On the forewing 2 red-yellow longitudinal streaks are placed before the apex. The two colours of the hindwing shade gradually into one another. The under surface is paler and without the leaden gloss. Ecuador (Riobamba, Huamboya), Peru, Bolivia. — *malia.* **malia** *Godm.* (= marginalis *Stgr. i. l.*) (35 a) is a form of *acraeida* in which the hindwing also bears a row of red-yellow spots before the distal margin on the upper surface. Peru (Rio Colorado, Pozuzo).

Note: Lymanopoda varola *Schaus* cf. Manerebia cyclopina *Stgr.* (p. 239).

42. Genus: **Pedaliodes** *Btlr.*

An extensive genus, characterized by the more or less undulate or angled form of both forewing and hindwing. Only the costal vein of the forewing is inflated at the base; median and submedian not swollen. Two subcostal veins arise before the end of the cell on the forewing. The recurrent vein is not present in either wing, or is only weakly indicated. The eyes are strongly hairy and the rather long palpus densely clothed with stiff hairs. Antenna without distinctly defined club, towards the tip gradually thickened. The headquarters of the genus are the high Cordilleras of Colombia to Bolivia, from whence single species have spread to Mexico on the one hand and Brazil on the other. They replace in these districts the *Erebia* of the temperate zone. They occur far above the forest-region, often in great numbers, frequenting wet places on the road; when disturbed they do not fly up, but seek to hide themselves among the stems of the plants nearest at hand. A very large number of the forms cited here are given by Hewitson and other authors as *Pronophila*, hence the synonymy of this genus requires careful attention.

Poesia Group.

poesia. **P. poesia** *Hew.* (53 b). As in most species of this group, the forewing is obtusely cut off at the apex. The upper surface is unicolorous dark brown. On the under surface, before the apex of the forewing, is placed a light grey spot finely dotted with brown, on the hindwing a small white spot at the costal margin and a white dot at the anal angle. The ♀ is lighter beneath. It has a light brown, obscure submarginal band on the forewing and a distinct light brown band on the hindwing, which is marbled with dark brown and bears some white dots. *phanaraea.* A second form of the ♀ is **phanaraea** *Hew.* (= pharanaea *Thieme*) (53 b, erroneously called *pelinaea* on the plate). It is distinguished from the type-form by having on the underside of the forewing in the middle of the submarginal band beside the white dots several chestnut-red spots placed one behind another. Colombia (Salto de Tequendane [Stübel,] Quindiu Pass, Rio Vitavo [Fassl]), Ecuador (Huamboya [Stübel]).

japhleta.

P. japhleta *Btlr.* (♂ = polemon *Sm.*) (53 b, erroneously called *phanaraea* on the plate) is rather like the preceding species, but differs in the large, triangular white spot at the inner margin on the underside of the hindwing. The ♀ of this species also possesses the rust-red spots before the middle of the distal margin on the underside of the forewing which are present in *phanaraea* and are wanting in the ♂, and the latter was described by Gr.-Smith as *polemon*. Merida (Venezuela).

pelinaea.

P. pelinaea *Hew.* (= apicalis *Stgr.*) (53 b, erroneously called *japhleta* on the plate). Upper surface dark brown, before the apex of the forewing with 2 white spots and some white dusting before and behind them. On the under surface these spots are widened into a band, which is continued to the middle of the distal margin. The underside of the hindwing shows a curved row of small spots formed of white dusting and some white dots between them. Bolivia (San Jacinto, Loco Valley, Corvico and San Antonio). The further locality "St. Domingo", given by Thieme from the Tring Museum, is still doubtful.

hewitsoni.

P. hewitsoni *Stgr.* (53 b). The upper surface is black-brown, the fringes chequered with brown and white. Beneath the forewing is red-brown to beyond the middle. Beyond the middle of the costal margin is placed a black-brown spot, which is sometimes continued as a dark band to the inner margin; the distal margin is dark brown; before the apex there is a whitish grey spot. Hindwing grey-brown, marbled and banded with dark brown. At the costa are placed two white spots and in cellule 2 a white dot. From Bolivia (Yungas de la Paz, Loco Valley, San Antonio). — Whether **primera** *Weeks* is a form of *hewitsoni* or a separate species I cannot decide, as I have neither seen an example nor the figure. According to Thieme's description the underside of the hindwing has the anal area silver-white and 2 silver dots of unequal size; in *hewitsoni* only one of the latter is present and the former character is wanting. The rest of the markings agree. From Bolivia.

primera.

perisades.

P. perisades *Hew.* (53 b). The species may be known by the underside of the forewing being almost entirely chestnut-red and by the semicircle of silver-white spots on the hindwing beneath. The upper surface is unicolorous brown. Bolivia (Corvico, Yungas de la Paz).

illimania.

P. illimania *Stgr.* (53 c). Above black-brown, the fringes chequered with somewhat lighter brown. Beneath the forewing is similar to that of *perisades*, but has several small white spots before the apex. The hindwing is brown, marbled and banded with silver-grey, a row of white dots and somewhat darker distal margin. Only 1 example, taken by Garlepp on the Illimani, in Bolivia, at an altitude of 4000 m. Koll. Staudinger in the Zool. Museum in Berlin.

phrasicla.

P. phrasicla *Hew.* (= perperna *Fldr.*, labulla *Thieme*, phrasicles *Kirby*) (53 c). Above uniform dark brown. On the under surface the species is easy to recognize by the round white spot placed in cellule 4 of the hindwing and somewhat out of alignment with the other white dots, being removed basewards; the hindwing marbled with dark brown. In the ♂ there are sometimes indications of a whitish yellow spot at the costal margin of each wing. The ♀ (53 c) has these spots larger and more distinct. In addition the submarginal band of both wings is lighter than in the ♂, and hence stands out much more distinctly. Widely distributed, Colombia (Rio Vitaco and East Cordilleras), Ecuador, Peru (Oroya), Bolivia. According to a figure prepared in the Tring Museum *Pronophila perperna Fldr.* is = *phrasicla Hew.* Hence the name *labulla Thieme* must sink. — **galaxias** *Thieme* is a form of *phrasicla* in which the costal spots on the under surface of both wings are large and snow-white. From Peru (Oroya and Callanga) and Bolivia (Rio Songo).

galaxias.

leucocheilos.

P. leucocheilos *Godm. & Salv.* In this species the apex of the forewing is not obliquely cut off but obtusely angled and the distal margin is rounded. Upper surface dark brown, before the distal margin with a row of white spots, extending from the costal to the inner margin, gradually decreasing in size and only separated by the broad brown veins. Beneath the forewing is dark brown, with a large whitish triangle before the apex and a red-brown longitudinal stripe, running from the base nearly to the distal margin. The hindwing is marbled with grey and brown, with 2 white spots at the costa and 2 white dots at the anal angle. This beautiful and rare species was found by Simons only in the Sierra Nevada, Santa Marta, Colombia and is in the Museum Godman and Salvin.

plautius.

P. plautius *Sm.* Above olive-brown, with a brownish white spot at the costal margin of the forewing, before the apex. Beneath the forewing is as above, except that the ground-colour is darker and the white spot larger. Along the distal margin runs a narrow stripe, irrorated with whitish. The hindwing is yellow-brown, marbled with dark brown, with a large light yellow-brown area between the veins of the median and several small spots of the same colour before the apex and in the basal area. Beyond the middle of the costal margin a white spot. A white dot in cellule 2. From Bolivia.

puma.

P. puma *Thieme* (53 c). Above unicolorous dark brown. Beneath the basal half of the forewing is chestnut-red, the distal margin brown with 4 white dots in a row before the apex. The hindwing is peculiarly marked.

It is brownish grey, with a large number of small blackish marks, each of which is of an approximately reniform, but indefinite shape, and which are arranged in transverse rows. In the middle of the costa a silver-white patch, before the apex some white dusting and at the anal angle a white dot. From Bolivia. Coll. Staudinger, in the Zool. Museum in Berlin.

Proerna Group.

proerna. **P. proerna** *Hew.* (53 c). The oldest described species of this group, which are mostly without markings. The distal margin of the forewing is rounded, that of the hindwing undulate. Above unicolorous brown. On the under surface the forewing is in places somewhat reddish, its apex and the whole hindwing marbled with grey, the latter with a white dot at the apex and another at the anal angle. Colombia (Llanos de San Martin); *phrasa.* Ecuador (Cerro Pululagua, Huamboya); Bolivia. — **phrasa** *Sm. & Kirby* (53 d) is a form of *proerna* in which the posterior of the 2 white dots on the underside of the hindwing is larger and more distinct. The reddish dusting is absent, but it is somewhat dusted with grey before the apex of the forewing and in the middle of the hindwing. Also on the upper surface the costa of the forewing and the apex of the hindwing are marbled with *obscura.* grey. From Bolivia. — **obscura** *Sm. & Kirby* (= pronoe *Stgr.*) is a form similar to *phrasa*, with the upper surface brown, towards the distal margin somewhat lighter, and the incisions in the margin whitish. The 2 dots on the underside of the hindwing are of unequal size, as in *phrasa*, but in *obscura* there are often further some fine white dots towards the costal margin of both wings. Sometimes also the disc of the forewing or the *phrasina.* anal angle of the hindwing is somewhat reddish. Bolivia. — **phrasina** *Stgr.* is merely a local form of *obscura* with the white dots before the costal margin on the underside of the forewing very distinct. From Yungas in Bolivia.

exanima. **P. exanima** *Ersch.* seems to me to belong in this group. Thieme indeed cites the species in the genus *Pronophila*, where Erschoff had placed it, but Erschoff's work was not at the time accessible to Herr Thieme. Through the kindness of Mr. Kirby I had some time ago an opportunity of examining this work and was able to make notes and sketches from it. From these I judge *exanima* to be a *Pedaliodes* near to *phrasa*; Erschoff describes it as follows: Expanse 55 mm., forewing with the margins entire, hindwing weakly dentate. Both wings unicolorous brown above. Beneath likewise brown, the hindwing with rather broad, somewhat lighter border, in which is placed in cellule 2, about 3 mm. from the distal margin, a distinct white dot. According to the description and Erschoff's figure, which represents a female, no other dots are present. Locality: Pumamarca, Peru.

fumaria. **P. fumaria** *Thieme* (53 c). Upperside of both wings and underside of the forewing as in *proerna*. On the under surface of the hindwing is placed a half-band, composed of grey-white atoms, which runs from the inner margin nearly to the middle of the wing and is proximally pointed. In the ♂♂ this band is often scarcely indicated, in the ♀♀ on the contrary very distinct. Venezuela (Merida).

simpla. **P. simpla** *Thieme* (53 d). One of the smallest and plainest species. The distal margin of the forewing fairly straight, that of the hindwing undulate. Above dark brown, in the distal third gradually becoming somewhat lighter, in the middle of the forewing an indistinctly defined dark scent-scale spot. Beneath the colouring is lighter brown, almost without dark marbling. A minute, scarcely visible white dot in cellule 2 of the hindwing, in the Peruvian examples entirely absent. Ecuador (Baños), Peru (Huancabamba, Cuzco).

empusa **P. empusa** *Fldr.* (= dryas *Stgr. i. l.*) (53 d). Above unicolorous brown, fringes of the forewing chequered with brown and white, those of the hindwing with brown and light brown. On the under surface the forewing is irrorated with light brown before the apex, at the costa there is a white spot and in cellules 2—5 four white dots in a straight row. Hindwing finely striated with brown all over, a white curved spot at the costal margin and two white dots in cellules 2 and 3. From the neighbourhood of Bogotá and Muzo in Colombia and from Cuzco (Peru).

poetica. **P. poetica** *Stgr.* (53 d) is very like *empusa*, and according to Thieme may be regarded as a Bolivian form of this, but the forewing is more rounded at the apex and on the underside of the forewing the row of dots and the costal spot are absent, while on the other hand there are at the costal margin 4 fine white dots at fairly uniform distances apart and below them some sparse white dusting. The underside of the hindwing is sprinkled all over with fine white dusting, especially at the distal margin. The white spot at the costal margin of this wing is larger than in *empusa* and divided into 2 parts by the subcostal vein. The fringes on both wings are unicolorous brown above and beneath, not chequered. Hence I regard *poetica* as a good species. From *exul.* Cocapata in Bolivia. — **exul** *Thieme* (53 e) is a form of *poetica* in which the dark brown scent-scale spot on the upperside of the forewing extends from the inner margin to the base and the fine whitish dusting on the underside of the hindwing and at the costal margin of the forewing is absent. The white spot at the costal margin of the hindwing is smaller. The fringes are brown as in *poetica*. The most southern form of the species. Rio de Janeiro.

naevia. **P. naevia** *Thieme* resembles *proerna* above, being dark brown with narrow scale-spot. Beneath somewhat lighter. The forewing has here 4 white dots at the costa as in *poetica*, of which the second, reckoning from the apex, is extended into a small spot. Before the middle of the distal margin a rather small, sharply defined chestnut-red wedge-spot. Hindwing ferruginous, but little clouded, with an indistinct dark discal band, a very small, obscure grey costal spot and a white dot at the anal angle. From S. Inez in Ecuador.

auraria. **P. auraria** *Thieme* (53f). Upper surface brown with very large, straight-margined scale-spot, extending to the costal and inner margins. Beneath lighter brown, at the costal margin irrorated with dark brown and gold-yellow, mixed with silver-white scales. Fringes chequered with brown and white. The hindwing beneath marbled with brown and black-brown, with a row of white submarginal dots and a bright gold-yellow costal spot, such as otherwise only recurs in *pallantias Hew.* From Vilcanota in Peru. 2 ♂♂ in coll. Staudinger in the Zool. Museum in Berlin.

Prosa Group.

prosa. phrasiclea. phrasis. **P. prosa** *Stgr.* (= phrasina *Sm.*) (53 f). Above dark black-brown, the scent-scale spot only reaching as far as the posterior end of the cell. Under surface brown, both wings with a broad lighter brown submarginal band, traversed in the middle by a row of white dots. The dot in cellule 2 of the hindwing is larger than the rest. At the costal margin of this wing a white spot, at the inner margin sometimes an obscure red-brown one. From Bolivia (Loco Valley, San Jacinto, Yungas de la Paz). — **phrasiclea** *Sm.* (53 d) is a form of *prosa*, chiefly differing in the absence of the white costal spot on the underside of the hindwing, the presence of a distinct rust-red spot at the inner margin of this wing and of a grey band in the cell of the forewing. From Bolivia. — **phrasis** *Sm.* (53 e) is a form in which the darkening has proceeded still further. The basal half of both wings is entirely dark brown and only the distal part of the submarginal band is perceptible, while only the white dots stand out distinctly. From Bolivia.

pheretiades. suffumata. **P. pheretiades** *Sm. & Kirby* (= subtangula *Stgr.*) (53 f). This species may be known by the snow-white apical spot on the underside of the forewing, below which is placed a brownish red-yellow spot. The upper surface is dark brown, in the middle of the forewing with a velvety scent-scale spot, distally lighter. The white spot of the under surface shows through above, but is here light brown. — In the form **suffumata** *Stgr.* this spot is dull white on the upper surface, somewhat dusted with brown. The red-yellow spot on the under surface is often joined to the white apical spot. Bolivia, 1500—3000 m.

emma. **P. emma** *Stgr.* A beautiful species; upper surface brown with 4 oval white spots before the distal margin of the forewing, which decrease in size posteriorly, except that the 3rd is somewhat smaller than the 4th. On the under surface the last 2 white spots are placed in broad black rings, otherwise they are as above. The underside of the hindwing is as in *pheretiades*. From the Rio Songo (prov. Yungas de la Paz in Bolivia).

panthides. **P. panthides** *Hew.* (= panthius *Kirby*) (53 f). Upper surface unicolorous brown. Beneath the forewing is red-brown in the basal half, distally marbled with brown and dark brown and with 2 dark transverse bands. Hindwing marbled with light and dark brown and with a darker band across the middle, a row of darker spots before the margin and 2 or 3 white dots. Bolivia (Yungas de la Paz, Cocopata).

Perperna Group.

perperna. petronius. **P. perperna** *Hew.* (= Pronoph. satyroides *Fldr.*) (53 c). Above dark brown, distally somewhat lighter, the ♀ with a black, white-pupilled eye-spot in cellule 2 of the forewing, which in the ♂ is usually replaced by a round black spot, but may sometimes also be entirely absent. In single cases, however, this spot has also in the ♂ a white pupil. On the under surface the eye-spot is always large with a distinct white pupil, a second eye-spot is placed in cellule 2 of the hindwing and a further round white spot before the apex of the forewing. In the ♀ these eye-spots and dots on a yellowish grey, sometimes somewhat reddish, submarginal band, striated with brown. In the ♂ this band is less distinct. Costa Rica, Panama (Chiriqui), Colombia (Cauca Valley, Carmen, 1600 m.), Venezuela (Caracas). — **petronius** *Sm.* is a form of *perperna*, distinguished by the larger size of the ♀ (65 mm. in expanse). The apex of the forewing is somewhat more produced, otherwise the shape is as in *perperna*, the somewhat prominent angle at the 3rd median vein of the hindwing being also present. The upper surface of both wings is velvety dark brown, the distal third of the forewing is somewhat lighter. The eye-spot of *perperna* is absent above. On the under surface the submarginal band of both wings is broader and more distinct. Proximally to this band is placed at the costal margin of the forewing a brownish white triangle and at the costal margin of the hindwing a brownish white spot. The eye-spot on each wing and the white dot in cellule 5 of the forewing are as in *perperna*. The male is still undescribed. From Valdivia in Colombia. Coll. Grose-Smith.

Pisonia Group.

pisonia. **P. pisonia** *Hew.* (53 f). Above unicolorous brown, lighter towards the distal margin. Beneath lighter brown, finely dark marbled, beyond the middle with an angled dark brown transverse stripe, followed distally by the somewhat lighter submarginal band, and with a more or less distinct row of white dots on both wings. The dot in cellule 2 of the hindwing is bordered with black. The ♀ is lighter brown above and has on the forewing a dark brown band. — *manis.* **manis** *Fldr.* (53 e) is a form of *pisonia*, differing in its smaller size and in having the inner margin of the hindwing beneath rust-red, this colour varying in its extent. The forewing is also less elongate and its distal margin somewhat more rounded than in *pisonia*. The ♀ of *manis* likewise differs from the ♂ in the lighter colouring above and beneath. Both forms occur in the high mountains of Venezuela, Colombia, Ecuador, Peru and Bolivia. — *dejecta.* **dejecta** *Bates* (= lithochalcis *Btlr.*) (54 a) is likewise a form of *pisonia*, distinguished by the rust-brown gloss between the medians on the underside of the forewing. From Costa Rica, Guatemala, Panama. — *circumducta.* **circumducta** *Thieme*, a further form belonging here, very near to *dejecta*, has on the upperside of both wings a broad submarginal band of glossy, light olive-brown colour. The scale-spot on the forewing is not so large as in *dejecta* and more divided into streaks. This form reaches furthest north of all the *Pedaliodes*. It inhabits Mexico. Coll. Staudinger (formerly Sommer), now in the Zool. Museum, Berlin.

manneja. **P. manneja** *Thieme* (= Pronoph. pisonia *Hew. var.*, Pedal. manis *Kirby*) differs from *pisonia* in having the upper surface unicolorous brown, not lighter distally, and in having a white costal spot on the underside of the hindwing. The submarginal band on the forewing beneath is only distinct proximally, becoming obsolescent distally. From Venezuela. The locality "Colombia" is uncertain. The butterfly is only represented in old collections and has not been found for the last 50 years.

pomponia. **P. pomponia** *Hew.* Shape as in *pisonia*. Above olive-brown. Forewing with a light golden brown submarginal band of moderate breadth, which is proximally rather sharply defined. The under surface is grey-brown, mostly with dark brown undulate markings, both wings with a black-brown bordered submarginal band, on the forewing of a light wood-colour, on the hindwing light grey-brown and strongly sprinkled with dark brown. From Ecuador (Pishcourco and Santa Inez).

Panyasis Group.

amussis. **P. amussis** *Thieme* (54 a). This species may be recognized by the almost straight costa of the hindwing, the apex of which is sharply rectangular, a form which does not occur elsewhere in *Pedaliodes*. For the rest the margin of both wings is obtusely dentate, with a somewhat prominent angle below the apex of the forewing. Above unicolorous brown, the tips of the fringes in the incisions white. Beneath the forewing is olive-brown with broad, somewhat lighter submarginal band, on which is placed a row of white dots, and with the apex brown, marbled with white. The hindwing is marbled with light and dark brown beneath, with several rows of dark brown spots, 2 white costal spots and a row of white dots. Colombia (province of Cauca).

phanias. **P. phanias** *Hew.* (54 a). Above unicolorous brown, before the distal margin somewhat lighter. Beneath with dark brown transverse lines, dark striation and lighter submarginal band on both wings. The ♀♀ are sometimes very large (cf. pl. 54 a). The early stages have been described by W. Müller. The full-grown larva is nearly 3½ cm. in length, thickened in the middle and terminating in 2 short anal points. The face is quadrate, brown, bordered with black, the cheeks are dark grey, the dorsal part light grey, the vertex bearing 2 short, obtuse, conical horns. The body is light grey with grey-green lateral stripes and in addition on the first 3 segments with a darker longitudinal stripe. Above the stigmata are placed posteriorly ascending lines. The larva lives on bamboo and is suspended free for pupation. The pupa is dull white and light grey. It has several obtuse angles and irregularities in the middle and 2 moderately long horns. The butterfly is distributed in South Brazil in the provinces of Minas Geraes and Parana and also occurs in Paraguay. — *granulata.* **granulata** *Btlr.* is a large form of *phanias* in which the central area on the underside of both wings is marbled with dark brown and with the distal boundary uniformly dentate. Thus the light submarginal band on both wings is not broader at the inner than at the costal margin. From Colombia (Bogotá). — *silpa.* **silpa** *Thieme*, a small form of *phanias*, has the apex of the forewing somewhat more pointed and the distal margin straighter. On the under surface there are two darker transverse stripes in the cell of the forewing. On the hindwing a dark median band runs from the middle of the costal to the middle of the inner margin, and is strongly excurved in the middle of the wing. From Bolivia (Illimani, Yungas, de la Paz), Peru (Limbani), Ecuador (Huamboya).

panyasis. **P. panyasis** *Hew.* (54 a). Above red-brown. Forewing with some white dots at the costal margin before the apex, which is almost rectangular. Fringes chequered with brown and white. Beneath the forewing is likewise red-brown, at the costal margin and before the apex marbled with dark brown and grey. The hindwing is light and dark marbled throughout, with two dark dentate transverse bands particularly prominent, one before, the other behind the middle. At the distal side of each of these bands is placed a row of quadrate whitish yellow spots, the first of which are close to the costal margin. From Merida (Venezuela) and Bogotá (Colombia). *mara.* — **mara** *Thieme* is a form of *panyasis* in which the underside of the forewing lacks the wood-yellow line beyond the middle, which is replaced by bronze-yellow dots placed parallel with the distal margin. The hindwing is in parts somewhat copper-red. From Bolivia (Yungas de la Paz).

drymaea. **P. drymaea** *Hew.* (= Daedalma d., angularis *Btlr.*) (54 a). The upper surface is dark brown, in the distal third of the wing changing gradually into light brown. The fringes brown, chequered with light brown. On the under surface the apex of the forewing is strongly dotted with white, before it a yellowish line similarly as in *panyasis*. The marbling of the hindwing is much darker than in *panyasis* and is condensed into dark transverse bands. Between these is placed at the costa a whitish spot, which is continued as a straight, light brown stripe to the middle of the wing and is here lost in the marbling. By this stripe the species is easy to recognize. The ♀ is like the ♂. Hewitson gives Colombia as locality, where Fassl has also recently found both sexes at the Cipaque and at the Quindiu Pass at altitudes of 3000 m. This is interesting inasmuch as Thieme questioned its occurrence in "New Granada", i. e. Colombia. The species occurs also in Bolivia (Yungas de la Paz) and Peru (Agualani). *rahab.* — **rahab** *Thieme*, the Peruvian form of *drymaea*, is somewhat larger than the latter, with the wings less dentate and the distal margin of the forewing less produced. The upper surface is unicolorous bronze-brown, not lighter distally. Beneath the wings are lighter brown with rust-red apex and grey atoms at the costal margin. The scheme of markings on the hindwing is as in *drymaea*, but darkened with rust-brown. A small spot on the costa and a larger one at the apex are distinctly lighter. Peru (Chaliabamba, 3300 m.).

tomentosa. **P. tomentosa** *spec. nov.* (54 b). Size of *drymaea*, the apex of the forewing somewhat more produced, distal margin of the hindwing undulate. Above black-brown, the fringes lighter brown between the veins. Beneath olive-brown, the costal margin of the forewing with several small, white-powdered spots before the apex. Hindwing finely striated with dark brown all over, with 2 indistinct brown dentate lines before and beyond the middle. The inner and distal margins are sprinkled near the apex with fine whitish grey powdering, suggesting the appearance of mildew. In cellule 2 and in cellule 3 a white dot. From Bogotá. 2800 m. Discovered by Fassl.

muscosa. **P. muscosa** *Thieme* (54 b). Above brown with large, darker scale-spot on the forewing and a whitish spot on the costa of the hindwing. Beneath the forewing is olive-brown with a yellow-brown submarginal band, which is anteriorly bent basewards. Before the apex a white-dusted triangle and 3 white dots. Hindwing similar to *panyasis*, marbled with light and dark brown, in the anterior part strongly dotted with white, so as to form in the basal area 2 lighter bands and before the apex a lighter half-band. Bolivia (Yungas de la Paz, Corvico, San Antonio), Colombia (Alto de las Ances, 2200 m., Fassl).

jephtha. **P. jephtha** *Thieme* (54 b) resembles *muscosa* in the scheme of markings, but the forewing is not rounded, but forming an acute angle at the apex, its distal margin not produced, but nearly straight; at the same time distinctly and sharply dentate. Above unicolorous brown. On the under surface of the forewing the apex is not spotted with pure white but powdered with grey and a row of grey spots is placed along the anterior part of the costal margin. Hindwing dark marbled and crossed by 2 distinct white oblique bands, with dentate margins, one from the middle of the inner margin straight to the middle of the costa, the other as a half-band from the inner angle to the 3rd median vein. From the Cordilleras on the coast of Colombia (province of Antioquia).

niveonota. **P. niveonota** *Btlr.* Above pitch-black. Forewing beneath ferruginous with brown costa and a quadrate brown spot at the end of the cell, behind it a conical yellow spot; a grey submarginal band with 3 white dots; distal margin broadly brown. Hindwing beneath olive-brown, sprinkled with black and silver-grey dots, across the middle a silver-grey band which becomes white at the inner margin, a silver-grey spot at the apex, several small spots of the same colour before the distal margin and between them a row of silvery dots. From Huasampilla in Peru (3000 m.) (Whitely). Only in the British Museum.

Pammenes Group.

pammenes. **P. pammenes** *Hew.* (54 b) may be recognized by the reddish cinnamon colouring in the distal half of both wings above. The distal margin in the forewing is rounded, the fringes chequered with brown and white. The under surface is similar to the upper, but lighter. On the costa of the forewing behind the middle a light brown spot and before the apex 3 white dots. Hindwing red-brown with a broad, light red-brown submarginal band, dentate at the edges and striated with dark brown, in which is placed a row of white dots in black rings. In the middle of the costa a narrow whitish spot. Bolivia (Rio Chaco, Rio Tanampaya, San Antonio). *garleppi.* — **garleppi** *Thieme* is the mountain form of *pammenes*, in which the submarginal band on the under surface is indistinct and the eye-spots placed in it are indistinct or entirely absent. From Cillutincara (3000 m.) and other high mountain localities in Yungas de la Paz (Bolivia).

antulla. **P. antulla** *Thieme* has the extreme apex of the forewing not rounded, but somewhat produced. The upper surface is unicolorous dark brown, the scale-spot does not extend into the cell. Beneath: forewing dark grey-brown, only in the anterior distal half somewhat lighter with 3 white dots before the apex. Hindwing dark red-brown, the posterior half of the inner and distal margins chestnut-red. Beyond the middle a distinct lighter discal line, at the apex a silver-white hook and a silvery dot below it, and in the middle of the costa a 2nd silvery dot. The ♀ has the markings paler. Limbani, Upper Peru.

daulis. **P. daulis** *Thieme* (54 b). Forewing with rather sharp apex, above unicolorous brown, the scale-spot small and triangular. Beneath lighter brown; the dark basal half of the forewing is separated from the distal part by a light line, which does not quite reach the inner margin. Below the apex 4 white dots. On the hindwing the discal line is somewhat undulate and extends from the costal to the inner margin. A row of white dots before the distal margin, the first widened into a spot. A further white dot beyond the middle of the costa. From Callanga in the province of Cuzco in Peru.

patizathes. **P. patizathes** *Hew.* (= palizethes *Kirby*) (54 c). Above unicolorous brown. Beneath marbled with somewhat lighter brown, with a reddish brown submarginal band on the forewing. The hindwing with a white costal spot, joined to the costal margin by a fine point. From Ecuador (BUCKLEY), Quindiu Pass in Colombia, 2800 m. (FASSL).

paeonides. **P. paeonides** *Hew.* (= Pron. porcia *Hew.* on HEWITSON's plate) is near the preceding species, but the forewing is not truncate. The upper surface is reddish brown, darkest in the middle of the forewing. The under surface is reddish brown, the hindwing dark sprinkled. The forewing as well as the hindwing has a costal spot, but both are very small and dull white. A small, narrow dirty white stripe runs from the 3rd median vein to the inner margin near the anal angle, by which the species may be known. From Ecuador. — *costipunctata.* **costipunctata** *form. nov.* (54 c). I regard as the Colombian form of *paeonides.* It is deep black-brown above, only at the distal margin of the forewing somewhat lighter for a breadth of about 3 mm. The small costal spots on the under surface consist on both wings of only a few white scales, and the fine white transverse line in the posterior part of the hindwing is also composed of single, widely-separated scales. Fringes dark brown. Distinguished from *simmias*, to which it has also some resemblance, by the entire absence of the rust-red colour. From Monte del Eden, Ibague, Colombia, 2700 m., December (FASSL).

pallantias. **P. pallantias** *Hew.* is reddish brown above, darkest in the middle of the forewing. Beneath reddish brown, striated with dark brown. Costal spots large, that of the forewing 4 mm. in length, triangular, that of the hindwing 10 mm., in the middle angularly bent, reddish yellow. From Ecuador.

uniformis. **P. uniformis** *spec. nov.* (54 c). Forewing with the apex rectangular. Above dark reddish brown, fringes in the anterior half of the forewing between the veins with whitish tips, otherwise brown. Under surface of the same colour, with only a trace of a small, somewhat lighter brown costal spot at ⅔ of the costal margin visible on both wings. In addition a brownish white dot in cellule 2 of the hindwing. The white tips of the fringes on the forewing as above. From Bolivia.

Phanoclea Group.

phanoclea. **P. phanoclea** *Hew.* The species of this group are distinguished by the elongate hindwing. *phanoclea* is brown above, towards the anal angle of the hindwing red-brown. Beneath the forewing is brown with a short white band at the costa, the hindwing yellow-brown, striated with dark brown, traversed by a straight wood-yellow median band and with a row of 4 black dots with white centres. Ecuador.

porcia. **P. porcia** *Hew.* (= Pron. paeonides on HEWITSON's plate) 54 c). Recognizable by the light yellow half-band at the apex of the hindwing beneath. The upper surface is unicolorous brown. Ecuador (BUCKLEY), Colombia (Monte Socorro and Quindiu Pass, 3500 m., FASSL). — *albutia.* **albutia** *Thieme* is a somewhat larger form with the light half-band on the underside of the hindwing twice as broad and not light yellow but pure white. The costal spot on the underside of the forewing is also pure white. From Peru.

phthiotis. **P. phthiotis** *Hew.* may be recognized by the tripartite white costal spot on the hindwing beneath. The forewing has a small costal spot, which is indicated on the upper surface also. Otherwise the colouring is brown. Ecuador.

simmias. **P. simmias** *Thieme* (54 c). Above unicolorous brown. Beneath little lighter, towards the apex of the forewing and at the anal angle of the hindwing mostly ferruginous. Forewing with indistinct costal spot. The transverse band beyond the middle of the hindwing is likewise sometimes very indistinct, as also the light dots in the disc. From Bolivia (Yungas de la Paz).

Piletha Group.

piletha. **P. piletha** *Hew.* (= pedacia *Stgr.*) (54c, d). May be known by the white half-band, anteriorly running out into a point on the underside of the hindwing. The upper surface is unicolorous reddish brown. In the ♀ the posterior half of the distal margin of the hindwing has sharper and more pointed teeth. Venezuela, Colombia, Paraguay. — *pedacia.* **pedacia** *Hew.* is a form of *piletha* in which the white half-band on the underside of the hindwing is somewhat broader at the inner margin and connected with the costal spot by a sinuous row of small white spots. Ecuador.

prytanis. **P. prytanis** *Hew.* has the hindwing very dark, with the half-band reduced to an oblique, quadrate white spot at the inner angle. The costal spots are very indistinct. The upper surface is dark brown, only spotted with white in the incisions of the strongly dentate margin of the forewing. Venezuela, Colombia. — *phoenissa.* **phoenissa** *Hew.* (54 d) is perhaps a form of the preceding. It only differs in having the distal margin of the forewing not dentate, but merely weakly undulate. Colombia.

phazania. **P. phazania** *Sm.* (54 d) may be known by the straight course of the white half-band of the hindwing from the inner margin to between the radials, while it gradually decreases in breadth and terminates in a fine point. Ecuador. — *cestia.* **cestia** *Thieme* is probably only a form of *phazania.* The half-band of the hindwing is almost the same shape, but is sulphur-yellow, not white. Colombia.

Tena Group.

tena. **P. tena** *Hew.* (54 d). The species of this group have the wings more elongated. *tena* may be recognized by the row of 4, in the ♀ 5, white spots on the upperside of the forewing, which are larger in the ♀, smaller in the ♂. In the ♀ there are in addition to this row one or two white dots before the apex of the forewing, and a row of 4 white dots on both surfaces of the hindwing. The latter are sometimes present also in the ♂ on the upper surface. On the underside of the forewing some of the white spots are sometimes absent. — THIEME regards the following large-spotted species *pasicles* as the ♂ of *tena.* Thus he has overlooked that HEWITSON himself says in the 5th volume of his "Exot. Butt." that ♂♂ of *tena* have smaller white spots than the ♀, which he figured. I have seen 10 examples of *tena* collected by STÜBEL, including 9 ♂♂ which all had smaller spots than HEWITSON's figure. One of them is figured on our plate. I am therefore compelled to regard *pasicles* as a separate species. *tena* flies in the high mountains of Ecuador at the snow-line (Pâramo de Cuvilche, 3800 m., Antisuna, 4300 m.).

pasicles. **P. pasicles** *Hew.* Above brown, the distal margin somewhat more rounded than in *tena.* Forewing with 3 light yellow spots beyond the middle, the first large, 6 mm. in length, divided by a vein into 2 parts, the other two small, especially the last. On the under surface the 2 small spots are absent and there is a black submarginal line. Ecuador (Alatillo).

reissi. **P. reissi** *Weym.* (54 d). On the upper surface an indistinct row of dots beyond the costal spot, which stands out more distinctly beneath. Hindwing lighter brown, finely marbled with dark brown. The ♀ was discovered by FASSL on Monte Tolima and only differs from the ♂ in having the dark brown marbling on the underside of the hindwing more prominent on account of the lighter ground-colour and in the presence of a brownish grey submarginal band, strongly dentate distally, before the distal margin. The costal spot of the hindwing is dusted with brownish beneath. On the Páramos of Tolima, of Moras and of Huila. 3600—4200 m. (STÜBEL, FASSL).

albonotata. **P. albonotata** *Godm.* (54 d). The white spot wanting on the under surface. The hindwing beneath has 2 dentate whitish transverse stripes, which are strongly speckled with brown. In the distal area a row of white sagittate marks, the anterior 2 larger and more distinct. Venezuela (Merida).

albopunctata. **P. albopunctata** *Weym.* (54 e). Under surface like the upper, which is here figured. The number of dots varies on the hindwing from 1 to 4. In the ♀ the underside of the hindwing has a broad yellowish brown submarginal band, in which are placed the white dots in dark rings. Peru (Cruz de Celendin, Páramo, between Marañon and Utcubamba, 3000—3600 m.); Bolivia (Quimtachata, Tiahuanaco, 4200 m.). — *flavopunctata.* **flavopunctata** *Stgr.* is a form of *albopunctata* with straw-yellow instead of white dots. From Bolivia.

perita. **P. perita** *Hew.* Size of the preceding. Above unicolorous brown, only the fringes of the forewing spotted with white. Forewing beneath with the margins marbled with grey and with a row of 4 white dots. Hindwing beneath with broad grey-yellow submarginal band, on which are placed 5 white dots in black rings. Ecuador.

nebris. **P. nebris** *Thieme* (54 e) may be easily known by the short, straight honey-yellow band beyond the middle on the upperside of the hindwing. Beneath this band is whitish yellow and between it and the distal margin are placed 4 white dots in black rings. Sometimes there is also on the underside of the forewing a transverse row of 4 small reddish yellow spots and beyond them a row of white dots. The former are sometimes present on the upperside also. The ♀ does not differ from the ♂ in markings. — According to FASSL the egg is spherical, bone-yellow, glossy and entirely covered with fine pitting. He found the butterfly in various localities in the Colombian East Cordilleras, rarely below 3300 m., and suspects that the types described by THIEME from the STAUDINGER collection were also taken there.

empetrus. **P. empetrus** *Thieme* (54 e). Above yellow-brown with a submarginal row of white dots, larger on the forewing, smaller on the hindwing. Fringes chequered dark brown and white. The butterfly seems to be rare in collections. Venezuela (Merida).

Polusca Group.

paneis. **P. paneis** *Hew.* (54 e). Above unicolorous brown. The rust-red band of the under surface rises from the inner angle of the hindwing and runs ⅔ across the wing, gradually tapering to a point. Beyond this *tyro.* a row of white dots. Peru, Bolivia, Colombia. — In the form **tyro** *Thieme* (= paneis *Hew. pt.*) (54 f) the rust-red band on the under surface is much shorter, occupying barely ⅓ of the breadth of the wing. Only one white dot, placed at the anal angle. The apex of the forewing is truncate, forming a right angle. *pheres.* Peru. — **pheres** *Thieme* (54 f) is a further form, in which the apex of the forewing is not truncate, but the distal margin is straight throughout, and the white dot at the anal angle is wanting. The rust-red band has about the same extent as in *tyro.* Peru, Bolivia.

philonis. **P. philonis** *Hew.* (54 e) is a similar species to *paneis* with the apex of the forewing truncate. The red-yellow band on the underside of the hindwing is as long as in *paneis,* beyond it is placed a light brown submarginal band, strongly dentate distally, which bears a row of 5 black eye-spots with thick white pupils. Ecuador, Peru.

pheretias. **P. pheretias** *Hew.* (54 f) may be known by the elongate white costal spot on the underside of the hindwing. The red-yellow anal spot is rather small. The upper surface is unicolorous black-brown. The ♀ was found by Fassl at the Quindiu Pass, Colombia, in 2 different forms. One is similar to the ♂, only differing in the presence on the underside of both wings of a broad grey-brown submarginal band, on the hindwing reaching the white costal spot and the rust-red inner-marginal spot and marbled with dark brown. *griseola.* The other female form (pl. 54 f), for which I propose the name **griseola** *form. nov.*, only differs in having the ground-colour of the entire underside of the hindwing yellowish grey-brown, finely striated all over with dark brown, so that the costal and anal spots have almost disappeared. From the Quindiu Pass (Fassl).

ferratilis. **P. ferratilis** *Btlr.* (= morenoi *Dogn.*) (54 f). Above dark brown, beneath lighter brown marbled with dark brown, the hindwing with broad ferruginous inner margin, from which arises a quadrate, light rust-red *uncus.* anal spot. Peru, Ecuador, Bolivia, Colombia. — **uncus** *Thieme* is a form of *ferratilis* in which the rust-red colour on the underside of the hindwing is confined to a narrow distal border, and which bears 4 white dots on the underside of the forewing. From Tucuman in North Argentina.

zoippus. **P. zoippus** *Druce.* A small species of 46 mm. expanse, above brown with the inner margin and anal angle of the hindwing red-brown. Under surface the same, the hindwing with some indistinct white spots before the distal margin and a dark brown submarginal line. Peru.

polusca. **P. polusca** *Hew.* (54 f). Above dark brown with narrow red-brown border at the inner angle. On the under surface distinguished by the 2 subanal white dots beyond the red-brown submarginal band of the hindwing, which is more or less extended. The larger, typical *polusca* occurs both in Colombia *polla.* (where Fassl took it on Mont Socorro at altitudes of 3500 m.) and in Peru and Bolivia. — **polla** *Thieme* (= polusca *Hew. pt.*) is a smaller form, in which the rust-red band on the underside of the hindwing runs up to beyond the cell. The inner angle is much lighter yellowish rust-red. The ♀ does not differ from the ♂. *syleus.* From Colombia (Quindiu Pass, 3800 m., Fassl). — **syleus** *Thieme,* a further form of *polusca,* in which the rust-red colour on the underside is confined to the transverse band of the hindwing only, there being no rust-red colour present at the anal angle and in the rest of the distal part of both wings. From Limbani, Peru.

asconia. **P. asconia** *Thieme* is a species similar to *polusca.* The transverse band beyond the middle of the hindwing on the under surface consists only of a quadrate orange-yellow spot at the inner margin and 3 small honey-yellow spots beyond the middle of the wing. A white dot between median veins 1 and 2. The ♀ is pale brown above, bordered with rust-red at the anal angle. The under surface of the forewing shows a pale costal spot. From Baños in Ecuador (Haensch).

pausia. **P. pausia** *Hew.* (= loca *Stgr.*, lora *Sm. & Kirby*). Above dark brown, distally reddish brown. Beneath the same, forewing with 2 or 3 very small white dots before the apex, hindwing with a narrow, light rust-red *lucipara.* half-band, which crosses a row of 4 white dots. Bolivia (Yungas de la Paz). — **lucipara** *form. nov.* (55 a) is a form of *pausia* in which the upper surface is not reddish distally, but only lighter brown. On the under surface the white dots of the forewing are absent and the hindwing shows only 2. From the Quindiu Pass, *baccara.* 2500 m., Colombia (Fassl). — **baccara** *Thieme* is a form which has on the forewing beneath a broad light brown submarginal band, finely bordered with white distally. The transverse band of the hindwing is twice as broad as in *pausia* and only in its posterior part rust-red. From the Colombian province of Antioquia (Kalbreyer).

coca. **P. coca** *Stgr.* (55 a) is allied to *pausia*, but the row of dots consists of 6 and they are differently placed. From Cocapata in Bolivia (Garlepp).

entella. **P. entella** *Thieme.* The distal margin of the forewing is emarginate below the apex. Above unicolorous dark brown with grey fringes. Beneath: forewing light brown with rust-brown apex; hindwing dark red-brown, with light ferruginous marbling, a ferruginous band arising from the inner margin and spots of the same colour beyond it between the median veins; a row of small black, white-pupilled dots in the same position as in *coca*. Baños in Ecuador (Haensch).

proculeja. **P. proculeja** *Thieme* has the distal margin of the forewing below the apex emarginate as in *entella*. Above unicolorous brown. Beneath lighter. Forewing with whitish costal spot and rust-brown apex. Hindwing brown with light rust-brown spots, yellowish towards the base, and an elongate-triangular, obscure, light yellow half-band between the inner margin and the middle of the wing. A row of blackish dots with white centres before the distal margin. From Urcos in Peru (Garlepp). Tring Museum.

tucca. **P. tucca** *Thieme* (55 a). Above unicolorous dark brown with broad scale-spot. On the underside of both wings some confluent spots forming more or less distinctly a chestnut-red submarginal band; beside this band a row of white dots. The figure has been prepared from an example in coll. Thieme. From the neighbourhood of the Illimani in Bolivia. — *luperca.* **luperca** *Thieme* is a form of *tucca* in which the scale-spot on the upper surface is half as broad. The ground-colour of the underside of the forewing is not light brown but dark brown and the chestnut-red band is absent. Santa Inez in Ecuador.

Pactyes Group.

~~*cledoina.*~~ cledonia. **P. cledoina** *Thieme* (55 b). Above glossy brown; the rust-red transverse band on the underside of the hindwing is anteriorly dusted with yellow and broken up into spots. A white dot is placed in cellule 2. From Yungas de la Paz and Cillatincara (Bolivia).

antonia. **P. antonia** *Stgr.* (55 a). The broad band on the upperside of the hindwing has a projecting branch and is present in the same shape on the under surface, but here light ochre-yellow. San Antonio and Cillatincara (Bolivia), Chiri-Mayo (South-East Peru). — *anina.* **anina** *Stgr.* is a form of *antonia* in which the band of the hindwing is only represented on the upper surface by a short light grey spot at the costa and on the under surface the lateral branch of this band is much shorter. Loco Valley in Bolivia. — *quincedis.* **quincedis** *Thieme* (55 b), the more copiously ornamented Peruvian form of *antonia*, differs from the latter in the large quadrate white spot on the forewing above and beneath. The band of the hindwing is bright sulphur-yellow above, with silky golden gloss, beneath as in *antonia*. Callanga in Peru. — *exsanguis.* **exsanguis** *Thieme* is a further form belonging here, and differs from *quincedis* in having the whole of the markings snow-white. Callanga, Peru.

pactyes. **P. pactyes** *Hew.* Above brown. Forewing with the fringes chequered with brown and white, hindwing with an indistinct reddish wood-yellow median band which shows through here from the underside. Beneath it is orange and somewhat angled. A white dot in cellule 2. Bolivia. — *auristriga.* **auristriga** *Thieme* is a form in which the upper surface is unicolorous dark brown and the underside of the forewing bears a distinct costal patch. The band of the hindwing is narrow and light saffron-yellow. Huancabamba in North Peru. *serra.* **serra** *Thieme*, in which the yellow band forms a short point distad on vein 2, and *stilla.* **stilla** *Thieme*, in which this band is broken up into separate spots, are forms of *auristriga* from the same locality. — *spina.* **spina** *form. nov.* (55 b) is a further form belonging here, unicolorous black-brown above and showing on the underside of the forewing a distinct whitish costal spot which is continued as a reddish brown band to the inner margin. Across the middle of the hindwing runs an anteriorly white, posteriorly ochre-yellow band, which in cellule 6 forms a sharp angle proximad, in cellule 4 an angle distad. In addition, opposite to the latter angle a white streak or tooth runs along the median as far as the cell. In the somewhat lighter distal area a row of 5 white, black-edged dots, in the ♀ (55 b) there is also a row of similar dots on the forewing. Found at the Quindiu Pass in Colombia (3800 m.) in September by Fassl.

chrysotaenia. **P. chrysotaenia** *Hpffr.* (55 b), a species similar to *pactyes*, may be recognized by the brown irroration on the under surface of the hindwing, across which runs a golden yellow band from the anal angle round the cell to the costa, broad posteriorly, but in the anterior half only quite narrow and forming several angles. From Peru (Chanchamayo and Huancabamba). — *fassli.* **fassli** *form. nov.* (55 b), a similar form to the preceding, has the distal margin of the forewing less undulate, and the ground-colour of the under surface is not marbled, but dark brown. The hindwing has a white, bipartite costal spot and a half-band running up from the inner angle, anteriorly narrowed and distally curved, also a few whitish dots between the end of this band and the costal spot. From Monte Socorro, 3400 m., Colombia, July (Fassl). Named in honour of the discoverer.

Peucestas Group.

peucestas. **P. peucestas** *Hew.* (55 c). Above dark brown; forewing with the same white band as beneath. The ♀ is quite like the ♂ except that the broad submarginal band on the underside of the hindwing is much lighter whitish grey. Colombia (Quindiu Pass, Salto de Tequentama), Peru, Ecuador (Baños), locally common.

porina. *palaepolis.* *corderoi.* **P. porina** *Hew.* (= Tisiphone lyssa *Burm.*) (55 c). Differs from the preceding species in the shorter white band above and beneath and also in the absence of the white spots on the underside of the hindwing. Ecuador (Baños, Huamboya), Bolivia (Rio Pongo, Yungas de la Paz), North Argentina (Tucuman). — **palaepolis** *Hew.* is a form of *porina* which on the underside of the forewing bears a small blackish, white-pupilled eye-spot at each side of the white band. From Bolivia and Limbani in Peru. — **corderoi** *Dogn.* (55 c) is a further form in which the light brownish grey submarginal band on the underside of the hindwing is broader and is also visible on the upper surface as a washed-out yellowish brown band. From Loja and Macas in Ecuador.

porima. **P. porima** *Sm.* (= porrima *Stgr.*) (55 c). The white band on the forewing extends into cellule 2, which is not the case in the 3 preceding forms. Further recognizable by the 3 to 5 whitish yellow dots on the underside of the hindwing, of which the middle one is somewhat larger. Bolivia.

pallantis. **P. pallantis** *Hew.* (55 c). The white band takes in the anterior part of the cell and extends nearly to the inner margin. The distal margin of the hindwing is obtusely angled. The ♀ is somewhat larger and has the forewing concave below the apex. Colombia (Monte Socorro, 3500 m.), North Peru (Huancabamba).

pylas. *uniplaga.* *parma.* **P. pylas** *Hew.* (= pilas *Hew.* in tabula) (55 c). The 2 white spots of the forewing are present also on the upper surface. The hindwing on the contrary is unicolorous dark brown above. Colombia (Bogotá). — In the form **uniplaga** *Thieme* the small white spot at the costal margin of the forewing is absent. Colombia. — **parma** *Thieme* is a very similar form, in which the small spot is likewise absent, but the large spot is somewhat further removed from the distal and inner margins and placed nearer to the costa. On the under surface this spot is somewhat larger and takes in a part of the cell. From the coast Cordilleras in Colombia (KALBREYER).

phaedra. *melaleuca.* *niphoessa.* **P. phaedra** *Hew.* Above brown with a bright primrose-yellow band across the forewing and a large spot of the same colour in the middle of the hindwing. On the under surface the yellow band of the forewing is broader than above and the spot on the hindwing is prolonged anteriorly and posteriorly into a complete band. **melaleuca** *Weym.* (= Pronoph. palades *Hew.*) (55 d) is a form of *phaedra* in which all the yellow markings are milk-white. Transitions occur between the two forms. The name *Pron. palades Hew.* cannot be retained for this form, as HEWITSON himself had previously described another species under the name *Pronophila palades* (the present *Lasiophila palades*). **niphoessa** *Thieme* (55 d) is another form of *phaedra*, with the band of the forewing chalk-white and somewhat broader, occupying the distal part of the cell. The white spot on the upperside of the hindwing is in both forms prolonged to the inner margin. From the Quindiu Pass in Colombia, 3500 m. (THIEME and FASSL).

Plotina Group.

plotina. *rapha.* *pharnaspes.* **P. plotina** *Hew.* (55 d). May be known by the large red-yellow spot before the anal angle of the hindwing above. Beneath this spot is ochre-yellow, marbled with brown, and from it a straight ochre-yellow stripe runs up to radial 2, where it is followed distally by a white dot. Venezuela. — **rapha** *Btlr.* (= plotinella *Sm.*) (55 d) is a form of *plotina* in which the red-yellow spot on the upperside of the hindwing is smaller and shorter. On the under surface of the hindwing the ochre-yellow stripe is broken up into crescent-shaped spots and from the end of the stripe a row of white dots runs to the costal margin. Venezuela. — In the form **pharnaspes** *Hew.* (55 d) the separate spots of the yellow band on the hindwing are not crescent-shaped, but elongate-quadrate, of the row of dots only one is present and before the distal margin on the underside of the forewing there is a broad, light reddish brown band. Venezuela, Ubala (Colombia, East Cordilleras). FASSL.

cocytia. **P. cocytia** *Fldr.* (= phaesana *Hew.* [in tabula]) (55 d). Above unicolorous dark brown. On the underside of the hindwing is placed between the narrow, straight ochre-yellow band and the distal margin a curved row of grey-brown spots. The yellow band is often broken up into small, more or less widely separated spots. In a ♀ captured by FASSL (55 d) the separate spots are proximally pointed. The figure of the ♂ has been prepared from FELDER's type in the Tring Museum. — The egg is spherical, milk-white, somewhat transparent. The surface is smooth and glossy. From the plateau of Bogotá, 2600—3200 m.

hopfferi. *tyrrheus.* **P. hopfferi** *Stgr.* (55 e). The broad red-yellow band of the hindwing is strongly sprinkled with dark brown on the under surface and extends to the apex. From Cuzco and Huancabamba in Peru. — **tyrrheus** *Godm. & Salv.* is probably only a form of *hopfferi Stgr.* The red-yellow submarginal band of the hindwing is shorter, only extending from the inner margin to one-half the wing. On the under surface it is ochre-yellow, somewhat longer than above and anteriorly pointed. Sierra Nevada of Santa Marta (Colombia). SIMONS.

Parepa Group.

P. parepa *Hew.* (55 e). Recognizable by the narrow red-yellow macular band on the upper surface of both wings. Beneath the forewing is exactly as above except that the apex is marbled with grey. The distal half of the hindwing is similarly marbled. The dark brown basal area forms a right angle in the middle. From Ecuador (Huigera, Guishapa, Loja). — **milvia** *Thieme* is probably the Peruvian form of *parepa*. The red-yellow band is confined to the anterior part of the forewing and is entirely absent on the hindwing. Distal half of the hindwing grey-brown beneath, with 2 black ocelli standing out distinctly. From Chosico in Peru (850 m.). There is only one female example, in the Tring Museum. *parepa.* *milvia.*

P. phaea *Hew.* Both wings traversed beyond the middle by a brownish red-yellow band, which on the forewing is divided into oval spots. In the ♀ the bands are broader and not divided on the forewing. The under surface is similar to that of the figured *ochrotaenia*, but the bands are narrower. Ocanna in Colombia. — **ochrotaenia** *Fldr.* (55 e) is a form of *phaea* in which the band on the upper surface is not divided; in the ♀ it is broader (6 mm.) and more ochre-yellow. From Bogotá (Colombia). — **fuscata** *Fldr.* (55 e), a further form belonging here, has the broad band on the upper surface strongly suffused with smoke-brown, obliterating its edges. On the under surface, on the other hand, the band is not ochre-yellow but more red-yellow. From Bogota (Muzo). Páramo de Guasco. — In **amafania** *Thieme*, another *phaea* form, the red-yellow band is placed nearer to the margin and runs parallel with it throughout. Its margins are smooth, nowhere interrupted and not angled, merely somewhat ventricose in the middle of the hindwing. Beneath the band is light ochre-yellow and there is a white spot at the costa of the hindwing and another at the anal angle. From Callanga (province of Cuzco) in Peru. Coll. STAUDINGER in the Berlin Museum. *phaea.* *ochrotaenia.* *fuscata.* *amafania.*

P. alusana *Hew.* The red-yellow band is placed somewhat beyond the middle. It is broadest in the middle of the forewing, narrowest at the inner margin of this wing; at radial 1 on the hindwing it is interrupted on the upperside and forms a right angle on the underside. There are also here in the distal area of the hindwing some ochre-yellow spots and a row of white dots. From Alusana in Ecuador (Coll. HEWITSON, Brit. Mus.). *alusana.*

P. praxia *Hew.* Above brown with a red-brown band beyond the middle of the forewing, running parallel with the distal margin, and a red-brown costal spot on the hindwing. On the under surface of the forewing this band is much broader posteriorly and is white at its origin, on the costal margin. A red-brown spot is placed in the cell. From Jima in Ecuador. *praxia.*

P. thiemei *Stgr.* (55 f). The dark red-yellow band, which runs from the costal margin of the forewing to the inner margin of the hindwing, is somewhat lighter on the underside of the forewing, but on the hindwing ochre-yellow, covered with brown speckling. In the ♀ the band is about a third broader beneath than in the ♂. From the Quindiu Pass in Colombia (3800 m.). THIEME, FASSL. *thiemei.*

P. peruda *Hew.* Above brown with a broad, straight red-yellow band beyond the middle, which is pointed at the costal margin of the forewing and the inner margin of the hindwing. Beneath the band is even broader than above, on the forewing red-yellow, on the hindwing nearly white, somewhat marbled with brownish. The distal margin of both wings is dusted with grey. Amazon. Coll. Brit. Mus. *peruda.*

P. symmachus *Godm. & Salv.* Above dark brown with a dark red-yellow band 3 mm. in breadth running across both wings near to and parallel with the distal margin. On the underside of the forewing the band is broader and lighter red-yellow. On the hindwing beneath 2 ochre-yellow stripes occupy the place of the band. Sierra Nevada of Santa Maria in Colombia. *symmachus.*

P. ornata *Sm.* (= phaeaca *Stgr.*) (55 f). The red-yellow band of the forewing is as strongly curved proximally on the underside as on the upper. The hindwing beneath has an ochre-yellow transverse band, which forms a right angle on the lower radial. Beyond it is placed a row of white dots in brown rings. Merida (Venezuela). *ornata.*

P. phaeina *Stgr.* (= Pronoph. phaea var. *Hew.*) (51 b). On the forewing the band is only very weakly indicated, but on the hindwing it is bright red-yellow and occupies almost half the breadth of the wing. On the under surface this band is light ochre-yellow on the hindwing, proximally straight-edged and distally dentate; finely sprinkled with brown, with a row of white, brown-bordered dots. Pacho (3000 m.) in the Colomb. East Cordilleras (FASSL); Central Cordilleras of Colombia (THIEME). *phaeina.*

P. pelinna *Hew.* (55 e). May be known by the obliquely placed yet straight band of the forewing. The band of the hindwing is anteriorly constricted, and forms in the middle 2 distally directed teeth. The colour of the bands is bright ochre-yellow. Beneath the bands are the same, only much lighter. Ecuador (Rosario, Villagomes, Macas). *pelinna.*

P. parrhoebia *Hew.* Recognizable by the rose-red colour of the band, which forms two angles on the forewing and one on the hindwing, and has its proximal edge quite irregularly dentate. On the under surface the forewing is as above, on the hindwing the band is broken up into several light brown spots. From Galgalan in Ecuador. *parrhoebia.*

phintia. **P. phintia** *Hew.* The upperside is similar to that of the preceding species, as is also the underside of the forewing, except that it bears a small light brown spot in the cell and the apex is broadly light brown, marbled with black. The hindwing beneath has a straight white band before and a light brown band beyond the middle, proximally margined with white. A black spot with white centre is placed anteriorly in this band and 2 similar ones before the distal margin. From Jima in Ecuador.

philotera. **P. philotera** *Hew.* (55 e). The dark red-yellow band forms an acute angle on the hindwing. On the under surface the hindwing is brown, crossed by 2 ochre-yellow parallel stripes which arise from a costal margin of the same colour and divide off a dark pointed triangle proximally and a long quadrate patch in the middle of the wing. Colombia (Páramo de Guasco, 3000 m. [Stübel], Quindiu Pass, 3500 m. [Fassl]).

phoenicusa. **P. phoenicusa** *Hew.* One of the largest species of the genus, with an expanse of 70 mm. The forewing is pointed, the distal margin dentate. Brown. Forewing with a distally curved red-yellow transverse band beyond the middle. Hindwing only with a red-yellow spot at the costal margin. Beneath the forewing is as above, except that it bears in addition a red-yellow spot in the cell and a grey spot at the apex. Hindwing beneath grey, marbled with brown, with a broad, lighter, dentate submarginal band, on which is placed a row of white, black-edged dots. Ecuador. Very rare. Only in coll. Hewitson (Brit. Mus.).

Physcoa Group.

physcoa. **P. physcoa** *Hew.* Above brown with a large, obliquely placed, oval red-yellow patch at the anal angle of the forewing. Beneath the distal half of both wings is marbled with grey and brown, the red-yellow spot *marulla.* as above. From Bolivia (Yungas de la Paz, Corvico). — **marulla** *Thieme* (56 a) is a form of *physcoa* in which the red-yellow spot does not rise obliquely but steeply, thus running nearly parallel with the distal margin. From Chanchamayo in Peru.

ereiba. **P. ereiba** *Fldr.* (= Pron. pasicrates *Hew.*) (55 f). May be known by the broad red-brown submarginal band on both surfaces of the forewing, which is dark brown. Figured from Felder's type in the Tring Museum. *cremera.* Bogotá (Lindig), La Vega, Colombian East Cordillera, 2200 m. (Fassl). — **cremera** *Godm. & Salv.* (erroneously called cremona on the plate in the "Biologia Centrali-Americana") is a form of *ereiba Fldr.* in which the band is more red-yellow and is curved basewards at the costal margin. On the under surface this band bears between the first and second median vein a small black, white-pupilled eye-spot. On the hindwing the last 2 eye-shaped dots in the submarginal row before the anal angle are larger and more distinct. From the Volcan Irazu in Costa Rica.

praxithea. **P. praxithea** *Hew.* (56 a). A large and beautiful species. The red-yellow band is present also on the underside of the forewing. The hindwing is brown beneath, striated with dark brown, with a transverse band irrorated with whitish beyond the middle. Bolivia, Ecuador (St. Rosario, Villagomes).

triaria. **P. triaria** *Godm. & Salv.* (56 a) is near to *praxithea* but is smaller and the red-yellow border of the hindwing extends to beyond the middle. Beneath the red-yellow band of the forewing is broader than above, and before the apex of the forewing, as well as before the distal margin of the hindwing, there is a row of white dots. From the Volcan Irazu in Costa Rica.

phila. **P. phila** *Hew.* (55 f). Somewhat smaller even than the preceding, but likewise similar to *praxithea.* The band on the hindwing only reaches median vein 3. The underside of the hindwing is uniformly marbled all over with light and dark brown, only with the apex ochre-yellowish. Bolivia (Yungas de la Paz), Peru (Cal- *philaenis.* langa). — **philaenis** *Thieme* is a form of *phila* in which the band of the forewing runs straight and reaches the distal margin above the distal angle. Of the red-yellow spots at the apex of the hindwing only an obscure ochre-yellow submarginal line remains. On the under surface there is a white triangle at the apex of the forewing. From Baños in Ecuador.

pandates. **P. pandates** *Hew.* Above brown with a broad ochreous marginal band, which in the anterior half of the forewing is broken up into spots, in the posterior half of this wing and on the hindwing is placed quite near to the distal margin, only leaving a narrow brown border. On the under surface the band has the same position and colour as above, but both wings are densely striated with dark brown. In the ♀ the band is pale *pamphos.* yellow and nearly twice as broad as in the ♂. Bolivia (Yungas de la Paz, Corvico, Rio Songo). — **pamphos** *Thieme* (56 a) should probably be regarded as only a form of *pandates* with the band entirely absent on the upperside of the forewing, but on the under surface scarcely differing appreciably. From Yungas de la Paz in Bolivia.

napaea. **P. napaea** *Bates* resembles on the upper surface the form *pamphos*, but is different beneath. Here both wings are traversed by a sharply defined submarginal band, on the forewing grey, on the hindwing yellowish with a pupilled eye-spot between the first and second median veins. Guatemala.

Juba Group.

juba. **P. juba** *Stgr.* (= cyrene *Sm. & Kirby*) (56 b). Above brown, beyond the middle of both wings with a row of yellowish brown or dark chestnut-red spots, which stands out but little on the dark ground and on the hindwing is angled and abbreviated. The under surface is irrorated with yellow-brown. The band of the hindwing is here ochre-yellow and reaches the inner margin with a large spot. Ecuador. — **triquetra** *Thieme* is a form of *juba* which has on the underside of the hindwing in the anterior part of the disc a dark brown triangle on a light ground. Ecuador. *triquetra.*

43. Genus: **Eretris** *Thieme.*

The forewing is broader and shorter than in the genus *Pedaliodes*, its distal margin is more rounded, whilst that of the hindwing is weakly undulate. The principal character of the genus consists in the shape of the inner margin of the hindwing, which shows a distinct excision before the anal angle. Antenna brownish yellow, with the separate joints somewhat thickened at their upper end and hence forming distinct rings. Its shaft is short, the tip obtuse, black. The butterflies are mostly dark brown, below medium size, with eye-spots or leaden-hued lines on the underside of the hindwing. They occur in the mountains of tropical South and Central America.

E. decorata *Fldr.* (= Pron. catargyrea *Stgr.*, phyllalia *Stgr.*) (56 b). Above unicolorous dark brown, distally somewhat lighter. Beneath easy to recognize by the very complicated pattern, which the figure distinctly reproduces. From Bogotá and Antioquia in Colombia. — **mariona** *Weeks* (= Pedal. m.) is a form of *decorata* in which the dark brown submarginal line on the underside of the forewing is proximally finely bordered with brick-red and the markings of the hindwing are more suffused with yellowish. The red-yellow bordering of the eye-spots is only narrow, not broad. Bogotá. *decorata.* *mariona.*

E. porphyria *Fldr.* (56 b). Above unicolorous brown. Beneath the hindwing has a straight red-yellow median line, proximally bordered with lilac. Beyond the row of small eye-spots 2 lilac undulate stripes at the margin. Figured from Felder's type in the Tring Museum. Venezuela. *porphyria.*

E. ocellifera *Fldr.* (56 c). Above brown, the hindwing with a very small subanal ocellus, the anal angle grey, slightly dusted with rust-yellow. On the underside of the hindwing before the eye-spots there is a proximally red-yellow, distally ochre-yellow, anteriorly pointed stripe, running from the inner margin to the middle of the wing. Figured from one of the types in the Tring Museum. Colombia. *ocellifera.*

E. encycla *Fldr.* (56 c). Above unicolorous brown. Beneath the proximal part of the hindwing is tinged with ochreous fawn-colour, the eye-spots are larger than in *ocellifera*, the space beyond them as far as the submarginal lines is filled up with glossy lead-colour. Figured from Felder's type in the Tring Museum. Venezuela. *encycla.*

E. calisto *Fldr.* (56 b). Above dark brown, distally somewhat lighter. On the under surface of the hindwing the eye-spots are broadly bordered with glossy lead-colour both basally and distally and midway between the submarginal lines is placed a leaden line. Bogotá and Veja in the Colombian East Cordilleras. *calisto.*

E. oculata *Fldr.* (56 d). Hindwing above with small subanal eye-spot dusted with rust-yellow. Beneath the wings are as in *encycla*, but the marginal area of the hindwing is not glossy leaden but violet-grey; the proximal stripe red-yellow, proximally bordered with black-brown. The eye-spots are surrounded with pale yellow-brown. Figured from the type in the Tring Museum. Bogotá. *oculata.*

E. apuleja *Fldr.* (56 b). Above brown, at the anal angle of the hindwing red-yellow, which colour occupies the posterior third of the distal and inner margins. On the underside of the hindwing an ochre-yellow band, anteriorly red-yellow, runs to the middle of the wing, becoming narrower anteriorly. The anal angle is red-brown. The eye-spots are very small. Venezuela. — **phyllalia** *Hew.* is a form of *apuleja* with two small, white-pupilled black spots in the red-yellow anal patch on the upper surface. Ecuador. *apuleja.* *phyllalia.*

E. hulda *Btlr. & Druce* (56 c). Above brown, at the anal angle somewhat reddish, with dark submarginal line. Forewing beneath with 3 transverse lines between middle and distal margin. The anal third of the hindwing beneath is ferruginous, traversed by an interrupted yellow stripe and with 2 eye-spots before the anal angle. According to the "Biologia Centrali Americana" Butler described this species from a damaged specimen in coll. Druce. Hence Godman and Salvin's diagnosis and figure in the above work agree but little with the original description. Costa Rica. The species seems, however, to be more widely distributed, for the example from coll. Weymer figured here, which agrees with the figure just mentioned, is from Ecuador. *hulda.*

E. subpunctata *Sm. & Kirby.* Brown. Forewing beneath with 2 dark transverse lines in the middle and 2 before the margin. Hindwing at the base dark brown, in the middle somewhat reddish, then a ferruginous dentate stripe, bordered with dark brown at both sides, and a grey-brown band with 6 small, black, white-pupilled eye-spots. At the distal margin 2 ferruginous marginal lines. From Bolivia. — **umbrina** *form. nov.* (56 c) approaches *subpunctata*, but differs from it in the presence of 2 anal eye-spots on the upperside of the hindwing, one in cellule 1 c near the distal margin, the other in cellule 2 somewhat further from the margin, both black with light brown ring and white pupil. For the rest the upper surface is dark brown, at the margin *subpunctata.* *umbrina.*

somewhat lighter with fine, dentate, darker submarginal line on both wings and 2 marginal lines, which are straight on the forewing, angled on the hindwing. On the under surface a yellowish grey band runs from the inner margin to the middle of the wing, where it is gradually lost in the ground-colour. The ferruginous dentate stripe with black bordering terminates close to the inner angle, whilst in *subpunctata* it runs into the inner margin 3 mm. from the angle. The dark grey band which follows, containing the eye-spots, shades off lighter distally. Of these eye-spots the first 4 are somewhat indistinct. Found by Fassl at Monte Tolima, Colombia, at 3200 m. in January.

subrufescens. **E. subrufescens** *Sm. & Kirby* (56 c). Above unicolorous brown. Beneath: hindwing in the distal half entirely reddish brown, with dark transverse bands beyond the middle and before the distal margin, and between them a row of small black ocelli with white pupils. Costa Rica. From Monte Socorro, 3600 m., Colombia (Fassl).

rubricaria. **E. rubricaria** *Thieme.* ♂ small. Above brown. Hindwing with thin honey-yellow marginal line and a small anal eye-spot. The ♀ upperside has on the forewing, in addition to a lighter, distinctly defined submarginal band (which is anteriorly broader, posteriorly narrower), an indistinct pale reddish line, on the hindwing two pale reddish lines, one discal, the other submarginal, and on each wing a honey-yellow marginal line. Beneath both sexes have on the forewing one, on the hindwing two glossy leaden lines before the distal margin and on the hindwing 6 eye-spots. Colombia. Berlin Museum.

ochrea. **E. ochrea** *Thieme.* Above dark brown with reddish gloss. Forewing beneath lighter with 3 dark transverse lines and a yellow marginal line. Hindwing beneath at the base and the costal margin darker, in the anal part brownish ochre-yellow with 4 red-brown transverse lines, one at the base, the second in the disc before the eye-spots, the third and fourth before the distal margin. The row of eye-spots consists of 5 or 6 small black ocelli with white pupils. A triangular ochre-yellow band runs from the inner margin to the disc, where it is broken up into 3 small spots. Ecuador. Berlin Museum (Haensch).

44. Genus: **Lasiophila** *Fldr.*

Head small, densely haired, with a tuft of hairs projecting forwards, eyes hairy, palpus porrect, three times as long as the head, the first joint short, the second long, the third with obtuse, densely haired tip; antenna short and thin. The costal of the forewing is inflated at the base, the median and submedian only somewhat thickened. Two subcostal veins arise before the end of the cell. The principal distinguishing character of the genus consists in its having the costal margin of the hindwing excised, the excision extending from the base to ⅔, a character that only recurs in *Daedalma*, which genus, however, differs in other respects. The hindwing is dentate and has 2 small tails, the proximal one shorter than the other. The middle discocellular of both wings forms an angle proximad, from which arises a small recurrent vein. In the markings on the underside of the hindwing the species are all very similar. The area of distribution of the genus embraces the countries between Venezuela and North Argentina, where the butterflies are met with in the high mountains, sometimes gregariously.

cirta. **L. cirta** *Fldr.* (= Pronoph. praeneste *Hew. pt.*) (56 e). The largest and most beautiful species of the genus, recognizable by the large milk-white spot on the hindwing. The double row of rust-red spots before the distal margin on both wings stands out in many examples more distinctly than in the figure. The under surface is similar to that of the figured *persepolis* (56 c), except that the basal area of the forewing is brown to *diducta.* beyond the middle. From Peru (Rio Sonchi, 2300 m. [Stübel],Chanchamayo, Rioja, Huancabamba). — **diducta** *Thieme* is a form of *cirta* with the rust-red spots on the upperside of the forewing proximally extended to the cell, the last 2 even joined to the rust-reddish basal part. From Huancabamba in North Peru.

piscina. **L. piscina** *Thieme* (56 d). The under surface of the forewing entirely resembles the figured upper surface except that the red-brown ground-colour is somewhat lighter. The underside of the hindwing is like that of *phalaesia* (56 d), thus the white spot is not present. Cuzco (Peru).

prosymna. **L. prosymna** *Hew.* The white band of the forewing is present above and beneath and does not quite reach the 2nd median vein. Under surface marbled with grey or brown, and with a dentate row of small yellowish white spots. Colombia, eastern slopes of the Bogotá Cordillera, 2000 to 2500 m., Subida del Tesari, 2300 to 2500 m. *dirempta.* (Stübel), Quindiu Pass, 2800 m. (Fassl). — **dirempta** *Thieme* (55 f) is a form which differs so little from *prosymna* as to be scarcely worth naming. The white band is somewhat narrower and is constricted in such a way *orbilia.* as to separate off its last spot. Ecuador. — In the form **orbilia** *Thieme* the chestnut-red markings of the upper surface are replaced by a brown colour, which is somewhat lighter than the rest of the ground-colour. Colombia.

phalaesia. **L. phalaesia** *Hew.* (56 d) was first described by Hewitson as the ♂ of *prosymna*, but he afterwards recognized it as a separate species. Above brown with the base broadly reddish brown. Forewing with broad red-yellow submarginal band, posteriorly rust-red, distally smooth-margined, but with its proximal *regia.* margin somewhat uneven, and continued in 3 smaller spots on the apex of the hindwing. Ecuador. — **regia** *Stgr.* (56 d) may probably be regarded as a form of *phalaesia*. The submarginal band of the forewing is on both surfaces distally somewhat dentate, proximally more strongly angled and more chestnut-brown. The spots at the apex of the hindwing are larger and continued to beyond the middle of the distal margin. From Bolivia and Peru. — *confusa.* **confusa** *Stgr.* (56 d), a further from belonging here, is smaller than the preceding two. The markings of the upper surface are different, especially on the hindwing, and the ground-colour in the basal half lighter brown. From Ecuador.

persepolis. **L. persepolis** *Hew.* (56 e). May be recognized by the strongly dentate dark brown median band on the upper and under surface, which interrupts the chestnut-red submarginal band on the 2nd median vein of the forewing. The basal part of both wings is chestnut-brown to the inner angle. Ecuador.

hewitsonia. **L. hewitsonia** *Btlr.* Above chestnut-brown, the distal half of both wings dark brown with 2 rows of chestnut-brown spots, the distal row on the forewing not reaching the apex. The under surface is like that of *phalaesia.* Bolivia. — *neda.* **neda** *Thieme* is probably to be regarded as a form of *hewitsonia,* with the two rows of spots golden chestnut-red and both reaching the costal margin of the forewing. The separate spots are also narrower and longer and the dark brown ground-colour extends somewhat further basad at the costal margin of the forewing. From Limbani in Peru.

circe. **L. circe** *Fldr.* (= Pronoph. praeneste *Hew.*) (56 e) has the dark brown distal margin narrower than in *hewitsonia* and only traversed by one row of chestnut-red spots. The under surface is nearly as in the allied species and has a row of white dots in the disc of the hindwing. The ♀ only differs from the ♂ in the lighter red-brown colouring above and beneath. Colombia (Bogotá and East Cordillera). — *cnephas.* **cnephas** *Thieme* is a form of *circe* in which the distal part of both wings is entirely darkened, so that all the red-brown spots are scarcely perceptible. From Salento (Colombian Central Cordillera).

palades. **L. palades** *Hew.* (57 a) is a species similar to *circe,* which differs in the darker, but at the same time brighter brown-red ground-colour and the smaller, lighter golden-brown and differently placed spots in the distal margin. The spot in cellule 2 of the forewing is long, bipartite, the inner part widely removed proximad, also the anterior spot is placed nearer the base. Beneath the forewing is brown-red with a row of red-yellow spots. From Ecuador. Rare.

zarathustra. **L. zarathustra** *Thieme.* Wings broad, forewing somewhat truncate at the apex. The outer tail of the hindwing broad and spatulate. All the markings very indistinct, the chestnut-red of the base and spots is scarcely distinguishable from the black-brown distal margin. The spots of the forewing are large and broad and proximally extend into the basal part. Somewhat more distinct is a triangular spot below the apex. The spots of the hindwing resemble those of *circe.* From Papallacta on the Chimborazo.

behemoth. **L. behemoth** *Thieme* is the shape of *zarathustra,* but the inner tail of the hindwing is wanting. Markings and colouring on the other hand similar to those of *circe Fldr.* Before the distal margin only one row of spots, which do not extend into the basal part. Only the spot in cellule 2 of the forewing is larger and accompanied by a small brown spot. This spot and also the costal spot of the forewing and two in cellules 4 and 5 of the hindwing are brilliant light red. Colombia. Rare. Coll. Maassen in the Zoolog. Museum, Berlin.

parthyene. **L. parthyene** *Hew.* Above dark brown with red-brown submarginal band, which on the forewing is narrow and bears a black spot before the apex. Before the latter, close to the costa, a white spot. On the hindwing this band is broader and bears 5 black spots. Beneath the forewing is red-brown at the base, the band is red-yellow, the white spot somewhat larger. Hindwing beneath much as in the allied species. Galgalan in Ecuador.

zapatoza. **L. zapatoza** *Westw.* (56 e). The smallest and the first published species of the genus. The spots in the brown distal margin of the forewing are more yellowish than the red-brown basal part. On the under surface almost the whole of the apex is yellowish and the hindwing bears a straight row of 4 small white spots. Venezuela.

sombra. **L. sombra** *Thieme* (57 a) approaches *zapatoza,* but differs so much in the larger size and darker colouring that it may probably be regarded as a good species. Above dark chestnut-brown, apex of the forewing broadly, distal margin narrowly black-brown. The marginal spots but little lighter than the basal part. Beneath the forewing is somewhat lighter than above, the apex marbled with grey and brown. The base and inner margin of the hindwing are similarly marbled; the distal part is for the most part filled up with brown, with a row of 4 white spots. Cordillera of Bogotá, Colombia.

orbifera. **L. orbifera** *Btlr.* (57 a). Above bright brown-red. Forewing with broad black-brown distal margin, which reaches to the cell, with 5 rather large, bright brown-red spots in a curved row. The hindwing with narrow margin and 5 brown spots before it. Under surface as in *zapatoza.* Bolivia. — *intercepta.* **intercepta** *Thieme* is a form of *orbifera* in which the brown-red spot in cellule 2 of the forewing is absent and on the hindwing the 3 anterior black-brown spots are confluent with the distal margin. From Baños in Ecuador. *munda.* In the form **munda** *Thieme* the ground-colour is brilliant chestnut-red, the dark distal margin is narrower and the red spot in cellule 2 is absent as in *intercepta.* Huancabamba (Peru), 3000 m. — *pura.* **pura** *Thieme,* a further form belonging here, is distinguished by the chestnut-colour appearing almost golden red. The markings are nearly black and sharply defined. The row of spots in the distal margin of the forewing is replaced by a continuous submarginal band of particularly brilliant colour. From Tucuman in North Argentina. — *semipartita.* In **semipartita** *form. nov.* (57 a) the dark brown distal margin of both wings is so broad that the dividing-line from the light brown-red basal half runs through the middle of the wing and the butterfly is conseqeuntly very similar to *Megalura hermione.* On the margin there are on the forewing only 2 small light brown-red spots and anteriorly a short streak, on the hindwing a light brown-red line. The under surface is as in *orbifera,* but the light spots in the distal margin of the forewing very small. From Manaure.

ciris. **L. ciris** *Thieme* (56 e) is similar to *zapatoza.* The forewing rather short with the apex almost rectangular. The tail of the hindwing is short and obtuse. The chestnut-brown ground-colour is much darkened and shades into the colour of the broad distal margin. In the latter a row of chestnut-brown spots. The submarginal row of black-brown spots on the hindwing is partly connected with the distal margin. From Ecuador and Colombia.

45. Genus: **Daedalma** *Hew.*

Head and eyes hairy. Palpus long projecting. In the forewing 2 subcostal veins arise before the end of the cell. The apex of this wing is obliquely truncate, the distal margin forms a right angle on the upper radial and below this is somewhat excised. The first and second median veins of the hindwing terminate in 2 obtuse tails which project straight out and do not bear the shaggy hair of the following genus. The costa of the hindwing is strongly excised. The few species are very similar and inhabit the Cordilleras from Venezuela to Bolivia, where they fly singly at especially high altitudes, above the tree-limit, and are all rare.

dinias. **D. dinias** *Hew.* (= boliviana *Stgr.*) (56 f ♂ upper and under surface, 51 b ♀). The form described and figured by Hewitson from Colombia is not entirely dark on the underside of the forewing, as Staudinger states (Iris X, p. 139), but has the same red-yellow spots as on the upperside, for Hewitson says in the text to the *dinias* plate in vol. 2 of his Exotic Butterflies that the underside of the forewing is "as above" and only mentions differences as regards the apex of the forewing and the hindwing. Thus this is the same form which Staudinger received from Bolivia and calls *boliviana,* and the latter name must consequently sink. The original *dinias* form with the red-yellow spot on the underside of the forewing has been taken by Fassl in both sexes in the Colombian East Cordilleras at Pacho (2200 m.) and at Monte Tolima (3200 m.). It is distributed across Peru to Bolivia. As the form with the dark under surface of the forewing is now without a name, I propose for it the *oenotria.* name **oenotria** *form. nov.* (56 f). On the upper surface the red-yellow spot is still present, but removed further from the costa than in typical *dinias. oenotria* occurs at Bogotá. In an intermediate form between *dinias* and *rhomboidea.* *oenotria,* which I call **rhomboidea** *form. nov.* (56 f), the red-yellow spot is of an obliquely quadrate shape and only its short inner angle enters the cell. From Bolivia.

inconspicua. **D. inconspicua** *Btlr.* Size and shape of *dinias,* except that the tails of the hindwing are somewhat longer and thinner. Above brown with some clouding, otherwise without markings. Beneath the forewing is grey with a brown band beyond the middle. The underside of the hindwing agrees entirely with that of *dinias* in markings and colouring. The ♀ is still unknown. From Quito and Papallacta on the Chimborazo. Rare.

drusilla. **D. drusilla** *Hew.* Shape of *dinias,* but smaller. Above brown with the fringes chequered with white. At the costa of the forewing before the apex 4 fine white streaks. Beneath the forewing is brown with a yellow-grey spot in the cell and a yellow-grey band before the distal margin, in which are placed a row of black dots. Before the apex a blue-grey spot. Hindwing beneath similar to that of *dinias.* The ♀ is not yet known. Colombia.

dora. **D. dora** *Stgr.* (56 f). Above almost entirely dark brown, only the tips of the fringes white between the veins. Forewing beneath brown with the apex marbled, hindwing beneath similar to that of *dinias.* The ♀ occurs in 2 somewhat different forms, one with a brownish ochre-yellow submarginal band on the upperside of both wings, in which are placed dark brown spots, the other with this band much infuscated and standing out but little from the dark ground-colour. On the underside of the forewing, which somewhat recalls the Palearctic *Vanessa urticae,* this band is, however, distinct in both forms. From the Bogota district, 2800—3200 m. (Fassl).

palacio. **D. palacio** *Dogn.* Size of the preceding species. Above brown. Forewing with a white transverse band across the middle and small white spots before the apex, hindwing with a row of small white spots from the costal margin to the middle. Beneath the forewing is as above, but the ground-colour lighter and the apex more spotted with white, hindwing similar to that of *dinias,* but with sharper dentate line and chestnut-red spots at the margin. The ♀ is not known. Loja (Ecuador).

46. Genus: **Polymastus** *Thieme.*

Forewing elongate, with the costal margin rather straight, the anterior part of the distal margin produced into 3 more or less sharp points, below the upper radial strongly excised. The tails and angles of the hindwing are differently shaped in the individual species. The principal distinctive character of the genus consists in the costa of the hindwing, which is as strongly excised as in *Daedalma*, forming at the base an anteriorly directed, rounded projection. The space between the first median vein and the inner margin on the underside of the hindwing is adorned with single long hairs which grow out of the veins and lie over the surface of the wings (at least in set specimens). The tips of the tails and the projecting angles of the hindwing also show shaggy ciliation. At the inner angle 2 points are placed side by side. The species occur in the Cordilleras of tropical South America from Colombia to Bolivia, but are among the greatest rarities. The ♀♀ of the majority of the species are not yet known. Most of the forms were described as *Daedalma*.

doraete.

P. doraete *Hew.* (57 a). On the under surface the light spots of the forewing are larger than above and lilac-coloured, between them is placed a row of eye-spots and two lilac longitudinal stripes border the cell. The hindwing has the ground-colour olive-brown, with a large number of angled silver spots and between them a row of 8 eye-spots. Colombia (Quindiu Paß, 3500 m. Mont Serrate near Bogotá, 3200 m. FASSL), Peru (Huancabamba, 3000 m. THIEME).

gideon. *antissa.* *enipe~~a~~us.*

P. gideon *Thieme* is the shape of *doraete*, but the upper surface is wood-coloured brown, with 2 rows of lighter (not white) long spots, between which is placed a row of round dark brown spots, continued also on the hindwing. The under surface is nearly as in *doraete*. From Cushi in Peru. — **antissa** *Thieme* is a form of *gideon* in which the long light brown spots of the forewing are broader and at the ends bordered with whitish. From Huancabamba in North Peru. — **enipeas** *Thieme*, described by him as a separate species, is perhaps only a smaller form of *gideon* with the middle teeth of the hindwing shorter and the entire upper surface of more dusky colouring. The long spots of the forewing are less conspicuous, but are marked with dull white dots placed beside the dark circular spots. Under surface as in *gideon* and *doraete*. From Cillutincara and Rio Songo in Bolivia.

dorinde.

P. dorinde *Fldr.* (57 b). This and the following species have only one row of spots on the forewing above and beneath. The hindwing, however, bears two rows. These are yellowish white. The ground-colour of the upper surface is light brown, in the ♀ figured from the Berlin Museum lighter and more yellowish than in the ♂. Rare. Colombia (Cauca), Ecuador.

emilia.

P. emilia *Btlr.* (57 b) is rather like the preceding species, but is distinguished by having the distal half of the hindwing beneath light grey and the row of eye-spots indistinct. The basal half of this wing is not dark green, as in *dorinde*, but dark grey with large silver spots. Found by FASSL at the Quindiu Pass at an elevation of 2700 m.

whitelyi.

P. whitelyi *Druce* (57 b ♂ and ♀). On the upper surface there is in the ♂ a second row of indistinct whitish yellow spots before the distal margin of the forewing. The ♀ has the ground-colour of the upperside yellowish brown, with rows of ochre-yellow spots. Peru, Bolivia (Chaco, San Antonio, Rio Songo), Ecuador (Baños).

47. Genus: **Thiemeia** *gen. nov.*

At the end of the following genus, *Catargynnis Röb.*, THIEME has placed 2 species, which differ very much in shape from the other species of the genus. They have on the first two median veins of the hindwing long straight tails, as in *Daedalma*, and the distal margin of the forewing is strongly excised in the middle. On the ground of these differences I propose erecting a new genus for them, and name it in honour of the late Prof. THIEME, whose too early death has deprived entomology of a good worker at the present family. These species cannot be referred to *Daedalma*, as they lack the concave excision at the costal margin of the hindwing, which is here more smoothly rounded. The first species was described as a *Pronophila*, the second as a *Catargynnis*.

phoronea.

T. phoronea *Dbl. & Hew.* The distal margin of the forewing projects in an obtuse angle on the upper radial. Above unicolorous dark brown, only the fringes broadly chequered with brown and white. The shape is quite similar to the figured *ortruda*, except that the two tails are not parallel as in this, but diverge somewhat distally. The ♀ is paler brown above with a blurred white costal spot on the forewing. Beneath the forewing is brown, at the apex marbled with white, reddish, yellowish and purple-grey, the fringes as above. Hindwing reddish chocolate-coloured, in the middle darker, basally with whitish band, distally with a row of 6 brown, white-ringed spots, which are surrounded with purple-grey. Venezuela. Very rare in collections, only in the Brit. Museum ♂ and ♀, and in the Berlin Museum 1 ♀ (coll. STAUDINGER).

ortruda.

T. ortruda *Thieme* (57 c ♀ upper and under surface). The ♂ is unicolorous brown above and resembles the ♂ of *phoronea* on the under surface also. But the ♀ is very different. It has on both surfaces of the forewing a broad ochre-yellow band, which above is also continued on the anterior part of the hindwing. From Bolivia (Rio Songo and Cillutincara, 3000 m.). Rare.

48. Genus: **Catargynnis** *Röb.*

After the 2 tailed species which THIEME referred to this genus have been removed (cf. the preceding genus, *Thiemeia*) the rest may be characterized as follows. Eyes strongly hairy. Palpus long projecting, with appressed hairs, the terminal joint pointed. Antenna with long, thin club. Forewing elongate, the distal margin fairly straight or with shallow excision in the middle, hindwing undulate, rarely more strongly dentate, occasionally somewhat produced in the anal part. In the forewing 2 subcostal veins arise before the end of the cell. The middle discocellular forms in both wings an angle proximad, from which a small recurrent veins arises. Many species have on the underside rows of silvery spots, especially on the hindwing, or silvery bands. The species occur in the high mountains from Guatemala to Bolivia, only one in South Brazil. They are mostly very rare in collections. Several species have been described as *Oxeoschistus*, some also as *Pronophila* or *Daedalma*.

gigas. **C. gigas** *Godm. & Salv.* (57 c ♂ upper and ♀ under surface). The largest species of the genus, distinguished by the broad red-yellow marginal band of the hindwing and the rows of silvery spots on the underside of both wings, which in the figured ♀ are larger than in the ♂. From the high mountains of Guatemala (Accytuno, Purula, Pansamala). Very rare.

rogersi. **C. rogersi** *Godm. & Salv.* Above brown with a broad red-yellow submarginal macular band on the forewing, on which are placed several round brown spots. Hindwing above without markings. Beneath the forewing is as above, but the hindwing similar to that of the following *phaselis*, bearing several rows of silver spots and between them a row of black eye-spots with ochre-yellow pupils and rings. From Irazu in Costa Rica and Chiriqui in Panama.

phaselis. **C. phaselis** *Hew.* Above unicolorous dark brown, beneath like the form *argyritis*, figured on pl. 57 c, but with the ground-colour of the under surface of the hindwing not dark brown but red-brown. The apex of the forewing is also red-brown, with some white spots. The ♀ is somewhat larger. From Venezuela and Colombia. *argyritis.* — **argyritis** *Thieme* (57 c) is the dark Bolivian form of *phaselis*, with the ground-colour of the hindwing beneath not rust-red but dark brown and the silvery spots larger and more distinct. From Bolivia and Peru.

pholoë. **C. pholoe** *Stgr.* (= Oxeoschistus phalsi *Gr.-Sm.*) (57 d upper and under surface). May be known by the submarginal row of red-yellow spots on the forewing. Beneath the silver spots are much smaller than in the preceding species. From Colombia (Cauca).

mirabilis. **C. mirabilis** *Btlr.* Shape of *Mygona prochyta*, but the forewing shorter. Above dark brown with green reflection, fringes black, chequered with sulphur-yellow. Forewing beneath dark brown with a black, white-bordered line before the distal margin, beside it 3 black blind eye-spots, a double white subcostal spot and some eye-shaped spots in the disc. Hindwing beneath olive-brown, with two obscure silver bands enclosing a dark dentate median band, beyond it a row of 8 black, white-pupilled eye-spots with yellow iris. Huasampilla (Peru). Rare. One ♂ in the Brit. Museum.

loxo. **C. loxo** *Dogn.* (= Pronoph. sagartia *Gr.-Sm.*, Daedalma bronza *Weeks*) (47 d). The species is distinguished by having the anal part of the hindwing elongated. The upper surface is unicolorous glossy bronze-brown. On the under surface the silvery bands are not well expressed. From Colombia (Bogotá, Zipapura).

ilsa. **C. ilsa** *Thieme* (47 e) has the wings less elongate than in *loxo*, the markings of the under surface much more distinct and the silver stripes in the ♂ brighter. The ♂ is unicolorous dark brown above, the ♀ more olive-brown. The tooth on the first median vein of the hindwing projects less in the ♀ than in the ♂, which is figured here. Moreover, the ♀ has the silver band on the underside of the forewing interrupted in the middle and the silver markings of the hindwing somewhat infuscated. Rare. Colombia (Cauca [coll. STAUDINGER], Rio Vitaca, 2500 m. [coll. FASSL]).

gerlinda. **C. gerlinda** *Thieme.* Similar to the preceding, but with the wings shorter and rounder. Above unicolorous brown with slight gloss. Underside of the forewing dull brown with 3 small eye-spots before the apex and indistinct lighter marginal spots; that of the hindwing is light brown shot with silvery, with a strongly dentate median band, which is interrupted in the middle, the base dark brown, a distinct row of eye-spots and a dark marginal band, strongly dentate proximally. Bolivia (Yungas de la Paz, Loco Valley, San Jacinto, Cillutincara).

helche. **C. helche** *Thieme* (57 d upper and under surface). Distal margin of the forewing obtusely projecting at the upper radial. The scheme of markings of the under surface is very similar to that of *gerlinda*, but *helche* may be at once distinguished here by the chestnut-red basal area of the forewing. The habitat is likewise Bolivia (San Antonio, Cillutincara). Rare. 2 examples, ♂ and ♀, in coll. STAUDINGER (Berlin Museum).

asuba. **C. asuba** *Thieme.* Above brown with strong coppery gloss. The forewing shows a large dusky scale-spot, extending in rays along the veins. The hindwing is more feebly dentate. On the under surface there is a chestnut-red spot between the median veins of the forewing, by which the species may be recognized. Of the 3 silvery transverse stripes on the underside of the hindwing the proximal one is quite straight. Bolivia (Yungas de la Paz). Rare, only one ♂ in THIEME's collection.

C. mena *Gr.-Sm.* (58 a). Above unicolorous brown, with bronzy gloss. Beneath the silver markings at the apex of the forewing and the silver bands on the hindwing are much darkened by brown dusting. There is mostly here on the forewing a small orange spot between the 2nd and 3rd median veins, which was wanting in the example figured. Bolivia (Yungas de la Paz, San Jacinto, San Antonio, Cillutincara). *mena.*

C. clethra *Thieme.* Similar to the preceding, but smaller. Above glossy bronze-brown. Forewing beneath without gloss, dark brown; only the apex somewhat silvery. A small chestnut-red spot between the 2nd and 3rd median veins. Hindwing beneath likewise dark brown, only the anterior half somewhat silvery. There is no trace of transverse bands, on the other hand all the veins are black and each cellule bisected longitudinally by a black line, forming a pattern similar to that of the *Actinote* species. At the base are placed some small red spots. From Peru (Villanota and Chanchamayo). 2 examples in coll. STAUDINGER (Berlin Museum). *clethra.*

C. schreineri *Foetterle* (= lemur *Thieme*) (58 a). Above pale yellowish brown with 2 rows of light ochre-yellow spots and dark grey-brown base. The hindwing is margined with reddish in the anal part. The under surface is similarly marked to the upper, except that the spots on the hindwing have a dull silvery gloss and in the basal half of this wing is placed a silver band partly broken up into spots. The ground-colour of the hindwing beneath is yellowish brown, finely striated with dark brown. Petropolis (South Brazil). *schreineri.*

49. Genus: **Mygona** *Thieme.*

The costal margin of the forewing is long, its anterior part produced distad, and the distal margin consequently excised below the upper radial. The hindwing is strongly dentate, the tooth on the 2nd median vein broader and stronger than the rest, but not produced into a tail. The costa of the hindwing is not emarginate, but smooth and rounded. In the scheme of markings of the under surface the species are all very similar. On the hindwing a white spectacle-shaped spot and 3 white dots forming a triangle are nearly always present and on the forewing mostly three chestnut-red or light brown dots. The species have been described as *Pronophila* or *Oxeoschistus.*

M. prochyta *Hew.* (= Oxeoschistus erebus *Gr.-Sm.*) (57 e). Above unicolorous dark brown, only the base and apical part of the forewing somewhat lighter. The ♀ has an indistinct, somewhat lighter brown costal spot and sometimes 2 reddish grey spots between the median veins of the forewing. Bolivia (Yungas de la Paz). — **chyprota** *Gr.-Sm.* (57 e) may probably be regarded as the Peruvian form of *prochyta.* It is somewhat smaller, on the under surface quite similarly marked, only more red-brown. On the upper surface the basal part of the wings is entirely red-brown, the distal part spotted with red-brown. From Peru (Cuzco, Callanga, Vilcanota). *prochyta.* *chyprota.*

M. thammi *Stgr.* (57 e upper and under surface). Similar to the preceding species, but the hindwing almost entirely chestnut-red above, with 3 black spots before the margin. The under surface very variegated. Peru (Chanchamayo, Cushi, Hunancabamba). *thammi.*

M. poeania *Hew.* Forewing above unicolorous brown, hindwing brown, the anal part occupied by a red-brown area, which reaches to the middle of the wing and is traversed by a brown submarginal line. The under surface is quite similar to the preceding species. From Ecuador. Rare. *poeania.*

M. irmina *Dbl.* (58 a). May be known by the large white spot of the hindwing on the upper surface, which is otherwise dark brown. The under surface is very similar to that of *prochyta,* except that the apex of both wings is marbled with lighter grey-brown. In the ♀ the distal margin on the upperside of the hindwing is narrowly brown-red, a brown-red spot is placed before the apex and 2 indistinct spots between the median veins of the forewing. Venezuela (Merida), Colombia (Bogotá, Rio Vitaco). *irmina.*

50. Genus: **Proboscis** *Thieme.*

This genus is distinguished by having the apex of the forewing falcate and strongly recurved posteriorly. The costa of the hindwing is concave. The distal margin of this wing is dentate and forms a short tail on the 2nd median vein. Only one Colombian species, which HEWITSON made known as a *Pronophila.*

P. propylea *Hew.* (58 b). Forewing beneath brown, with red-brown base and apex and 3 brownish yellow spots before the distal margin. Hindwing beneath yellowish brown with brown median band and brown margin, in which is placed a row of whitish yellow spots and dots. Colombia. The species is very rare and was unknown to THIEME in nature. FASSL took a specimen in the neighbourhood of Muzo at 2000 m. *propylea.*

51. Genus: **Drucina** *Btlr.*

Forewing narrow and elongate, its apex less recurved than in *Proboscis* and, with the exception of *orsedice*, rounded, the distal margin weakly excised, but even, that of the hindwing slightly undulate or smooth. Palpus long and porrect, the terminal joint almost half as long as the middle joint.

leonata. **D. leonata** *Btlr.* (58a, b). The ♀ is somewhat larger than the ♂, of which we figure both surfaces, the apical part of the forewing above is somewhat lighter and there are some milk-white spots in the disc. On the hindwing the ferruginous stripes extend further and between them are placed beyond the cell 3 obscure white rays. Costa Rica (Irazu and Rio Sucio), Panama (Volcan de Chiriqui).

championi. **D. championi** *Godm. & Salv.* Somewhat larger than the preceding species. Above black-brown. Forewing with a submarginal row of 5 or 6 small ochre-yellow spots, hindwing with 6 bright blue oval spots in a curved row, of which 5 are large (5—10 mm. in length) and the last, at the anal angle, small. Forewing beneath brown with the apex marbled with grey and with 4 white spots, the hindwing marbled with grey and brown, with brown spots and indistinct double row of eye-spots. A rare and beautiful species. Discovered by CHAMPION in Guatemala (Cerro Zunti), coll. GODMAN and SALVIN.

venerata. **D. venerata** *Btlr.* (58b, c). BUTLER and STAUDINGER have referred this species to the genus *Pronophila.* Although the forewing is not so sharply pointed as in the other *Drucina* species, yet the narrow, elongate forewing with its oblique distal margin seems to me to point rather to the genus *Drucina*, to which THIEME has referred it. Hence I follow this arrangement. The ♀ is distinguished from the ♂, which we figure on both surfaces, by having the light spot on the underside of the hindwing not white but brownish grey, so that it stands out but little from the ground-colour, on the other hand the dentate line before the anal angle is distinctly white. Peru, Bolivia (San Antonio and Cillutincara).

orsedice. **D. orsedice** *Hew.* The forewing is pointed, but the apex is not recurved. Above red-brown. Both wings with a red spot in the cell and 2 rows of red spots beyond the middle, which are small on the forewing, large on the hindwing. Hindwing further with some red marginal spots. Forewing beneath reddish, whit a pale brown spot before the apex and some red spots between the median veins, on which are placed a row of 4 black eye-spots, mostly with white pupils. Hindwing beneath pale brown, a red-brown band before the middle, then a row of 5 red-brown spots with white pupils. Expanse 2⁴/₅ in. (71 mm.). Ecuador, Peru (Huanca-*astoreth.* bamba). — **astoreth** *Thieme* is a form of *orsedice* in which the forewing is unicolorous brown above and the *violacea.* red marginal spots of the hindwing are absent. Expanse 60 mm. Bolivia (Yungas de la Paz). — **violacea** *form. nov.* (on pl. 58 erroneously called *orsedice*) seems to be a form near to *orsedice* or a separate species. It is characterized by the brownish violet ground-colour of both wings. All the margins and all the veins are bordered with dark brown; the costal margin of the forewing and the distal margin of the hindwing are in addition narrowly bordered with violet-brown. The submarginal spots are light-pupilled on the under surface. From Macas in Ecuador. Coll. NIEPELT.

52. Genus: **Dioriste** *Thieme.*

The species of this genus, which on account of their similar shape were formerly referred to *Oxeoschistus Btlr.*, THIEME has separated from it, as they all have a certain resemblance *inter se.* This consists in the presence on the upper surface of large white or light yellow spots and on the underside of the hindwing of a whitish yellow discal band with a submarginal row of eye-spots.

tauropolis. **D. tauropolis** *Dbl. & Hew.* (= laetifica *Bates*) (58c). May be known by the large, sharply dentate, yellowish white spot on the hindwing, which on the underside is prolonged to the inner angle as a narrow stripe and encloses a row of eye-spots; there is further a white line at the base beneath. The spots of the fore-*cothon.* wing are alike above and beneath. Distributed from Mexico over Guatemala to Nicaragua. — **cothon** *Salv.* is a somewhat aberrant form of *tauropolis.* It has on the forewing 3 additional whitish yellow spots (2 before the apex, 1 in the disc), the spot on the hindwing is larger and on the underside the band which crosses the cell of the hindwing is much broader and occupies a larger area of the cell. From Costa Rica and Panama.

cothonides. **D. cothonides** *Gr.-Sm.* (58d). Recognizable by the broad brick-coloured red-yellow median area of the hindwing, which changes into red-brown towards the inner margin. 3 small black eye-spots with white pupils near the anal angle. The under surface is not strikingly different from that of *cothon.* The ♀ is marked quite similarly to the ♂. Costa Rica (Carthago), Panama (Chiriqui).

leucospilos. **D. leucospilos** *Stgr.* (58c). Forewing above almost unicolorous dark brown; the markings of the under surface (which we figure) only show through very indistinctly. Hindwing above with large irregular white *pugil.* spot in the cell. Peru. Ecuador. — **pugil** *Thieme* (58c) is a form in which the white spot on the upperside of the hindwing is somewhat larger and bears a round dark brown spot, in place of which on the under surface there is added a fifth eye-spot. In the ♀ the markings of the underside are also present above and on the hindwing the white spot is prolonged to the costa. Bolivia (Illimani and Yungas de la Paz).

53. Genus: **Cheimas** *Thieme.*

Apex of the forewing rectangular, margin of the hindwing slightly undulate. Above with large, slightly glossy, yellowish or bluish white spot on the hindwing. Beneath almost without markings, red-brown. Only one species, published as *Oxeoschistus.*

opalinus. **Ch. opalinus** *Stgr.* (58 d). The large silver-grey spot of the hindwing with variously coloured reflections. According to the angle of light it has a golden yellow or a light blue sheen. The under surface is entirely red-brown with the margin but little darker. Hindwing with dark brown transverse lines, a yellow median dot and a submarginal row of yellow dots. Venezuela. — *spoliatus.* **spoliatus** *Stgr.* (58 d) is a form of *opalinus* with the yellow dots on the underside of the hindwing entirely absent and the spot on the upperside less white. Likewise from Venezuela.

54. Genus: **Oxeoschistus** *Btlr.*

After the species of the preceding genera *Mygona, Proboscis, Diorista* and *Cheimas*, which BUTLER had united with *Oxeoschistus*, have been removed, this genus only contains quite similar species, which agree in the following points: Palpus thinly haired, its terminal joint pointed and projecting for about the length of the head. Apex of the forewing rounded and not distally produced. Distal margin of the hindwing more or less strongly undulate. Most of the species have on the upperside a broad brick-coloured red-yellow submarginal band which bears a row of black spots. They occur in the high mountains from Guatemala to Bolivia.

pronax. **O. pronax** *Hew.* (58 d). On the upperside the band is curved basewards at the costal margin of the forewing, by which the species may be known. Beneath the forewing is as above, but the band whitish at the costal margin, the hindwing red-brown with 2 rows of yellowish white spots before the margin, which are bisected by the black veins. Between them some very small eye-spots. Peru and Bolivia.

duplex. **O. duplex** *Godm.* (58 d). The band is distally sharply dentate on the hindwing and at the distal margin there is a row of red-yellow crescents. The black-brown spots on the band are very large. On the under surface the apex of the forewing is ferruginous, the band anteriorly white. Hindwing red-brown, the band bordered with white at both sides, a white line is placed in the basal area and the black spots have white pupils. Bolivia, Peru.

simplex. **O. simplex** *Btlr.* (58 e). The band is anteriorly narrow and posteriorly broad and at the inner margin of the hindwing extends to the distal margin. The dark spots are scarcely half as large as in *duplex.* The figure of the under surface (pl. 58 e) represents a ♀. In the ♂ the white median stripe of the hindwing is only half as broad. — According to FASSL the egg is the same size as that of *Satyrus briseis*, is spherical and has a mother-of-pearl gloss on the surface. The species is distributed in Colombia. FASSL found it already at 1200 m., but also at altitudes of 2500 m. According to GODMAN it also occurs in Ecuador.

puerta. **O. puerta** *Westw.* (58 d) differs from *simplex* in that the red-yellow band decreases less in breadth anteriorly, but on the hindwing does not extend to the distal margin. On the other hand the brown distal border reaches the anal angle. The brown spots vary in number and size. HEWITSON gives the number of spots on the forewing as 4, on the hindwing as 7, in the example figured only a few are present. Beneath the brown spots on the forewing are very small, the hindwing similar to that of *simplex.* Colombia, Venezuela, Costa Rica. — *submaculatus.* **submaculatus** *Btlr.* (58 e) is a form of *puerta* in which the red-yellow band is especially broad on the hindwing and as in *simplex* extends to the anal angle, but on the forewing becomes very narrow and is anteriorly broken up into small spots. Instead of the brown spots there are on the hindwing only a few dots at the anal angle, on the forewing they are entirely absent. Beneath the proximal part of the forewing is very dark. From Costa Rica. — *pervius.* **pervius** *Thieme* is a similar form to *submaculatus*, but considerably larger, with the band on the forewing broader and not broken up into spots. From the province of Cauca in Colombia.

isolda. **O. isolda** *Thieme* may be recognized by the dark mahogany-red band, which is the same shape as in *puerta*, thus not touching the distal margin of the hindwing. The spots placed on this band are very small or absent, especially on the forewing. The under surface is similar to that of *puerta*, but the markings are duller, the ocelli smaller and not bordered with yellow. In the ♀ the colouring of the upper surface is somewhat lighter. Ecuador (Mirador) (HAENSCH).

protogenia. **O. protogenia** *Hew.* (59 a). The bright red-yellow band of the upper surface is especially broad on the hindwing and the row of brown spots placed in it is complete. On the underside of the hindwing the basal transverse line is absent, by which the species may be known. Colombia, Ecuador, Peru, Bolivia.

euryphile. **O. euryphile** *Btlr.* (= euriphyle) (59 a. Upper surface. The U on the plate is incorrect). May be konwn by the light yellow colour of the band, which on the upperside only shades off somewhat into red-yellow in its distal part, but on the underside into white, and on the forewing is entirely broken up into spots. Beneath the forewing has 4 ocelli and before the apex several white spots, the hindwing in the proximal part some light markings and distally a row of eye-spots. From Costa Rica (Irazu), Panama (Chiriqui).

hilarus. **O. hilarus** *Bates.* Instead of the band there are here on the upper surface 2 rows of small, irregularly placed red-yellow spots on both wings. On the under surface of the forewing the spots are white and some of them joined together in pairs. Between them are placed black spots bordered with red-yellow. Hindwing brown, all the veins white, 2 sulphur-yellow transverse bands cross the middle, so that a latticed pattern is formed. In addition a white dentate line is placed at the margin. Guatemala (Volcan de Fuego, Cerro Zunil, Purula), Mexico (Xantipa and Omilteme in Guerrero).

55. Gattung: **Pronophila** *Westw.*

In consequence of the division proposed by Butler only a few out of the large number of *Pronophila* species figured and described by Westwood, Hewitson, Felder and others are still regarded as belonging in this genus, and indeed only those which are similar in shape and markings to the first two species cited by Westwood (*thelebe* and *cordillera*). The greater part of the others form the present genus *Pedaliodes Btlr.* (p. 250). The *Pronophila* species (in the restricted sense) have broad wings, the hindwing nearly round with the distal margin more or less undulate, the inner margin of the forewing comparatively long, its distal margin consequently vertical (not oblique) and nearly straight. On the underside of the forewing almost all bear a row of black eye-spots with blue pupils; the upper surface is black-brown, sometimes unicolorous, sometimes with white, brownish red or grey-brown spots before the apex of the forewing. They are mostly rather large butterflies, and inhabit the high Andes from Central America to Bolivia.

timanthes. **P. timanthes** *Salv.* (59 a upper and under surface). The black spots, which on the upperside are placed on the long brownish red oval patches, bear on the under surface blue pupils. Costa Rica (Irazu), Panama *intercidona.* (Chiriqui). — **intercidona** *Thieme* (59 a) may perhaps be regarded as a form of *timanthes* in which the proximal halves of the oval patches are wanting with the exception of the anterior ones and which has these spots brilliant golden brown. Sometimes there is further a red spot between the 2nd and 3rd median veins. From Ecuador (Santa Inez).

deverra. **P. deverra** *Thieme* has before the distal margin of the forewing a row of light reddish spots, the anterior ones somewhat larger. The under surface resembles that of *Pron. thelebe* (59 b), especially the hindwing. On the forewing the macular band is continued further, to the inner margin, and is not white, but has the light reddish brown colour of the upper surface. From Ecuador.

assarhaddon. **P. assarhaddon** *Thieme* (= rosenbergi *Lathy*) (59 b). Above black-brown, at the base somewhat lighter, the forewing with the same white macular band as on the figured under surface. Hindwing only with the tips of the fringes between the veins white. Ecuador (Santa Lucia) (Haensch).

thelebe. **P. thelebe** *Dbl. & Hew.* (59 b) is the best known species of the genus. The white spots on the upper surface vary in number, size and shape. Examples from Peru and Bolivia are more copiously spotted with white than those from more northerly localities. The ♀ has the ground-colour of the upperside much paler brown and the hindwing is more strongly dentate. Venezuela, Colombia, Ecuador, Peru, Bolivia. — *obscura.* **obscura** *Btlr.* is probably a *thelebe* form. According to Butler's description the colouring of the upper surface is as in *thelebe.* Hence we must assume that the upperside has white spots on the forewing. But the under surface, which Butler figures, shows no such spots, only the apex is whitish. The 4 black eye-spots with light blue pupils are placed in the disc in a straight row on a dark ground. The underside of the hindwing is almost exactly like our figure of *thelebe*, pl. 59 b. Venezuela. 2 examples in the Brit. Museum. *thelebina.* — **thelebina** *Thieme* (59 b) is a further form of *thelebe*, somewhat smaller and with smaller white spots, only the first is the same length as in *thelebe* and bears above a black dot at its proximal end. The hindwing is smooth-margined. On the under surface the ocelli and the red dots are indistinct, as also are the markings on the hindwing. Colombia (Rio Dagua), Peru (Chanchamayo), Bolivia (Yungas de la Paz).

brennus. **P. brennus** *Thieme* (59 c upper and under surface). The row of pale brown spots on the upper surface is sometimes dirty white or reddish; sometimes there is also a further small red-yellow spot at the proximal side of the first of these spots. In the ♀ the ground-colour is not so deep black as in the ♂, hence the row of eye-spots on the under surface is sometimes visible in the ♀ on the upperside also, as was the case in one of the examples found by Fassl. Hitherto only found in western Colombia, in the Cauca Valley by Hahnel, Popayan and Rio Dagua by Kalbreyer, Rio Agna Valley by Fassl.

orchus. **P. orchus** *Hew.* (= orcus *Btlr.*) (59 c). Above dark brown with four small grey spots before the apex of the forewing. On the under surface the species may be known by having several white spots before the apex and a red-yellow one in the middle of the forewing and at the anal angle of the hindwing a fine black dentate line on a white ground. Colombia.

cordillera. **P. cordillera** *Westw.* (59 c). Above brown, hindwing and apex of the forewing with slight reddish brown gloss. This beautiful species may be recognized by the chestnut-red basal half of the forewing beneath. Bolivia.

orcus. **P. orcus** *Latr.* (= orchamus *Godt.*, porsenna *Hew.*) (60 a). Above unicolorous dark brown, only the apex of the forewing somewhat lighter. The distal margin of the hindwing is weakly undulate. The ♀ is somewhat larger (expanse 78 mm.) and somewhat lighter brown and has on the upperside of the forewing 4 round black spots, corresponding in position to the eye-spots of the under surface. These spots are placed in a yellowish brown patch. Instead of the grey-brown colour of the ♂ the ♀ has the ground-colour of the underside of the hindwing light reddish brown, as also the distal margin of the forewing. The dark markings are all of a dark red-brown colour. Colombia. Fassl took both sexes at the Alto de los Ances at an altitude of 2200 m. and at the Quindiu Pass (2600 m.). — *locuples.* **locuples** *Thieme* is a form of *orcus* in which the under surface of the forewing bears a second small red-yellow spot near the costa. On the upper surface the lighter brown apical shade is separated by a brown border from the distal margin. Bolivia. — *nepete.* **nepete** *Thieme* is a further form which has on the upper surface a light yellow-brown macular band with slight golden gloss, extending from the costa to the 2 nd median and also marked on the underside as a brownish white area. Otherwise the under surface does not differ from that of *orcus*. From Peru (Chanchamayo). — A third form is *parallela.* **parallela** *Thieme*. In it the 4 ocelli on the forewing beneath are placed in a straight line one below another, parallel with the distal margin, and all of uniform size, and the last but one is bordered with red at both sides. From Venezuela (Valencia).

variabilis. **P. variabilis** *Btlr.* is allied to *orcus Latr.* (porsenna *Hew.*). Above with green and reddish bronzy gloss, without white spots, but with 3 dark spots at the apex of the forewing and 2 or 3 at the anal angle of the hindwing. Beneath the red-yellow spot of the forewing is absent, the hindwing is more whitish, the bands at the base and in the middle darker, with 8 white-pupilled and light-bordered eye-spots and a broad brown margin, proximally bordered with lilac. Peru.

epidipnis. **P. epidipnis** *Thieme* (60 a). Above unicolorous brown. Beneath similar to *orchus Hew.*, but the ground-colour of the hindwing is throughout light grey without white, only at certain angles a slight silvery gloss is visible. The median band is nearly straight. Merida, Venezuela.

lucomo. **P. lucomo** *Thieme*. A large species. The costal margin of the forewing is somewhat longer, hence the distal margin is more oblique than in the other species. Hindwing strongly dentate, its distal margin somewhat produced in the middle. Above dark brown, before the apex somewhat lighter. Beneath similar to *orchus Hew.*, but without the red-yellow spot on the forewing. On the hindwing the dark median band is bordered with white on both sides at the costal margin; at the inner margin a large white spot is placed before it. From Vilcanota in Peru. Coll. Staudinger in the Berlin Museum.

colocasia. **P. colocasia** *Thieme* is similar to the preceding species, unicolorous brown above, and differing from it in having the median band of the hindwing beneath broader, sharply defined on a silvery ground, basally bent round and not reaching the inner margin. The anterior part of the distal margin of this wing is broadly bordered with ferruginous. From Rioja in Peru. Coll. Staudinger in the Berlin Museum.

56. Genus: **Corades** *Dbl. & Hew.*

The species of this genus may be known at a glance by the elongate form of the hindwing, the anal margin of which runs out in an almost straight line into a long tail, which is formed by the first median vein. Consequently the cellules at the inner margin are very narrow. Only in a few species the tail is shorter. The distal margin of the forewing is plain or rounded, that of the hindwing likewise plain or slightly undulate. The costal vein of the forewing is swollen at the base. Two subcostal veins arise before the end of the cell on the forewing. The middle discocellular forms on both wings an angle proximad, from which arises a small recurrent vein. The rather long palpi and the eyes are finely haired. The butterflies are of medium size, the upper surface unicolorous black-brown or partly red-brown or yellow-brown, sometimes with yellow or white spots. The under surface is often light and dark marbled, the hindwing then agreeing in colouring with the apex of the forewing. Sometimes silvery stripes are present. Their range of distribution embraces the Andes from Venezuela to Bolivia, only one species reaches North Argentina. Statements differ as to the vertical distribution. The altitude at which the *Corades* species fly is given by Bürger in his „Reisen eines Naturforschers" as 500 m. to 2800 m., whilst according to Thieme they are confined to particularly high altitudes and Fassl gives the lowest elevation as 1400 m., the highest as over 3500 m. They always fly singly and are not common.

pannonia. **C. pannonia** *Hew.* (= ichthya *H.-Schäff.*, ♀ = fluminalis *Btlr.*). Above unicolorous brown. Forewing beneath brown with silvery striation at the apex and 3 red spots in the disc. Hindwing beneath striated with silver throughout, with a broad yellow band across the middle. *fluminalis Btlr.* may probably be regarded as the ♀ of *pannonia.* Upper surface brown with 2 white spots at the costa and 3 red-yellow ones between or beside the median veins. Hindwing with 3 ferruginous streaks between the veins. Beneath the forewing has paler spots. Hindwing ochre-yellow striated with copper-brown and with copper-brown median and marginal *ploas.* bands. Venezuela. BUTLER does not give the locality of his *fluminalis.* — **ploas** *Thieme* (59 d) is the Colombian form of *pannonia.* In it the 3 red-brown spots on the underside of the forewing are much darkened and scarcely visible, the hindwing has instead of the broad yellow band a silvery grey one, which, however, is largely covered with brown striation. The ♀ was found by FASSL and differs from the ♂ in having 2 small brownish white spots on the brown upper surface, placed at the costal margin, one 9, the other 17 mm. from the apex, the latter bipartite. Apex and distal margin broadly lighter. The under surface is coloured *domina.* like that of the ♂, except that the white colour is somewhat more extended. A second form of the ♀ (**domina** *form. nov.*) (59 d), in addition to the 2 somewhat more distinct white spots, has on the upperside of the forewing a row of 4 red-yellow spots and on the hindwing a row of red-brown ones, and below them a red-brown stripe which runs to before the tip of the tail. The distal margin is also narrowly bordered with red-brown. The under surface is as in the first female form. Colombia (Alto de las Cruces), 2400 m., West Cordillera. According to FASSL the egg of *ploas* is somewhat larger than that of *Pap. machaon,* bomb-shaped, bone-white, smooth at the base, otherwise much pitted.

argentata. **C. argentata** *Btlr.* (= pannonia *Hew.* part.) (59 d). Above brown, distally lighter. Forewing beneath with 3 golden brown spots. Hindwing beneath with dark basal and median areas, anteriorly separated by a short silver line and distally bordered by a somewhat curved one. Bolivia.

melania. **C. melania** *Stgr.* The tails are somewhat shorter, the upper surface unicolorous glossy bronze-brown. Under surface dark brown, forewing with a small whitish spot between the first and second median veins, which is sometimes absent. The hindwing is entirely covered with fine, short, silvery transverse streaks, so that the dark median band can scarcely be recognized. Bolivia.

cybele. **C. cybele** *Btlr.* (60 b). Above unicolorous black-brown. Beneath the species may be known by the *semiplena.* golden brown hammer-shaped spot on the forewing. Colombia. — **semiplena** *Thieme* is a form with the posterior half of the cell on the forewing beneath filled up with golden brown along the median. Peru. — *fusciplaga.* **fusciplaga** *Btlr.* is probably a further form of *cybele*; the underside of the forewing bears a very small light brown spot in place of the golden brown hammer-shaped spot. According to BUTLER the upper surface is similar to that of *sareba.* Peru.

medeba. **C. medeba** *Hew.* (60 a) has shorter tails and in the ♂ a unicolorous brown upper surface. On the under surface recognizable by the red-yellow longitudinal stripe in the cell of the forewing and some red-yellow spots behind it in the disc. The ♀ has on the upperside a row of small, obscure reddish spots *columbina.* on the forewing and also some similar spots in the disc of the hindwing. From Colombia to Bolivia. — **columbina** *Stgr.* (60 b) is a *medeba* form in which there is only a small spot in place of the red-yellow longitudinal stripe on the under surface. Occurs not only in Colombia but also in Bolivia among the type-form.

sareba. **C. sareba** *Hew.* (= melusina *Stgr. i. l.*) (60 b) may be known by the brownish yellow basal half of the forewing beneath. Upper surface dark brown, the forewing with an indistinct submarginal row of somewhat lighter spots. Bolivia.

chirone. **C. chirone** *Hew.* (♀ = laminata *Btlr.*) (♂ 60 a under surface, on the plate erroneously called *ulema,* ♀ 59 d upper surface). The ♂ is unicolorous brown above. Beneath differing from *ulema* in having in the posterior half of the forewing only 2 light yellow spots, not 3 as in *ulema,* and in the light band on the hindwing between the base and the middle only reaching the median, whilst in *ulema* it extends nearly to the base of the tail. The ♀ (laminata *Btlr.*) has on the upperside of the forewing a submarginal row of yellow-brown spots, which in the anterior part of the hindwing are united into a broader half-band. Beneath the markings are similar to those of the ♂, which we figure, but at the inner angle of the forewing there are 3 larger, ochre-yellow spots in place of the 2 in the ♂. The hindwing is marbled with lighter in the basal and median areas and instead of the ochre-yellow stripe in the middle of the silver-white band there is here a brown and white marbled stripe. Both sexes of this species, which is at present in but few collections, were found by FASSL in July on Monte Socorro (Colombia) at an altitude of 3500 m.

ulema. **C. ulema** *Hew.* (59 d under surface, erroneously called *chirone* ♂ on the plate). According to HEWITSON the upper surface is unicolorous brown, the example figured here is likewise brown, but has a red-brown gloss throughout, with no trace of a band. The examples with distinct light submarginal band, mentioned by THIEME, are thus transitional to the form *tripunctata.* Beneath similar to *chirone,* the differences have been given above under the latter. The ♀ has on the upperside a submarginal row of red-brown spots on the forewing, a narrow, continuous red-brown band on the hindwing. On the under surface 4 red-yellow spots are placed in the posterior part of the forewing, on the hindwing the first band is anteriorly white, posteriorly sprinkled with brown scales, hence indistinct, the outer band is light ochre-yellow, basally margined with white, *tripunctata.* and contains 3 fine black dots. From Bolivia and Peru (Huancabamba, Limbani). — **tripunctata** *Weym.*

is a form of *ulema Hew.* in the male of which a row of brownish red-yellow spots runs from the costal to the inner margin on the forewing above and is continued to the inner angle of the hindwing as a continuous band, anteriorly broad, posteriorly tapering to a point. 3 small round black spots are placed on this band in the anterior part of the hindwing. The under surface is similar to that of *ulema*, but the bands are broader and much purer white. Peru (Puente de Sigsi in the valley of the Rio Sonchi, 2500 m., June [STUBEL]).

albomaculata.

C. albomaculata *Stgr.* (60 a). May be known by the dull white, bi- or tripartite apical spot on the upperside of the forewing. Beneath similar to *ploas*. The ♀ is somewhat larger than the ♂ and has an additional small white spot on the costa. Beneath the apex and the distal margin of the forewing are more strongly marked with silver-white than in the ♂. Bolivia and North Peru.

cistene. *dymantis.* *generosa.*

C. cistene *Hew.* (60 b). Above brown with 6 small golden brown spots in a very sinuous row on the forewing and indistinct spots on the hindwing, which scarcely stand out from the ground-colour. Beneath the species may be recognized by the unusual shape of the brown median band on the hindwing (cf. fig.). Bolivia. — **dymantis** *Thieme* (= callipolis *Stgr.*) is a form of *cistene* is which 2 or 3 small golden brown spots are present also on the upperside of the hindwing. Venezuela, Colombia and Ecuador. — In the form **generosa** *Thieme* (= peruviana *Stgr.*) (60 b) the golden brown spots on the upperside of the forewing are larger and across the hindwing runs a half-band composed of contiguous golden brown spots. Peru.

enyo. *almo.*

C. enyo *Hew.* (= auriga *H.-Schäff.*) (60 c) is characterized by having the upper surface of the hindwing almost entirely golden brown, which colour also extends to the base of the forewing. The under surface is similar in markings to that of *almo* (cf. figure, pl. 60 c), but the apex of the forewing and the entire hindwing are light whitish grey and the 2 median stripes of the hindwing quite narrowly brown and distally bordered with white. From the mountains of Caracas, Venezuela. This form is for the most part only represented in older collections. The Colombian form more recently incorrectly distributed in collections under the name *enyo* is much darker and should be called **almo** *Thieme* (60 c). The hindwing is dark brown above, distally chestnut-colour, beneath marbled with dark grey-brown. The ♀, which is likewise figured, has on the hindwing a golden brown submarginal band and on the under surface of both wings the greater part of the distal margin broadly golden brown. Colombia, Ecuador, Peru, Bolivia.

chelonis. *rubeta.* *lactefusa.*

C. chelonis *Hew.* (60 d). Similar to the preceding, but the forewing bears only 3 larger spots. Beneath the 2 apical spots are white. In the ♀ these apical spots are contiguous above and the posterior spot, between the median veins, is three times as large as in the ♂. Colombia (Quindiu Pass and Cañon del Tolima, 2500 m.) (FASSL). — **rubeta** *Thieme*, a form of *chelonis*, has the hindwing more rounded and the tails shorter, forewing somewhat broader, sometimes with a small fourth golden brown spot at the inner margin. From Merida in Venezuela. — The form **lactefusa** *Thieme* has the under surface of the forewing entirely milk-white, only a thin brown line crosses the middle of the wing. Ecuador.

iduna. *marginalis.*

C. iduna *Hew.* (60 d, erroneously as *marginalis*). Resembles *chelonis* in the forewing, but the 3 spots are white, not golden brown. In the anterior part of the hindwing there is a large, bright red-yellow or golden brown spot, which does not reach the distal margin. Bolivia. — In the form **marginalis** *Btlr.* (= marginata *Kirby*) the golden brown discal spot reaches the distal margin. Peru (Huancabamba and Cushi).

peruviana.

C. peruviana *Btlr.* (60 d) was formerly regarded as a variety of *iduna*. According to THIEME it is a separate species. The white spot between the median veins of the forewing is not bipartite as in *iduna*, but consists only of one spot between the first and second medians. The anal angle of the hindwing is more produced than in *iduna* and the disc almost entirely bright reddish golden brown. The distal margin is only narrowly, the inner margin broadly dark brown. From Ecuador and the coast Cordilleras of Colombia.

procellaria.

C. procellaria *Thieme* is the smallest species of the genus and resembles *iduna*, but the forewing is shorter, the hindwing more rounded and the tail much shorter. The white spot between the median veins of the forewing is bipartite as in *iduna*. The 2 white apical spots as in that species. Hindwing dark brown with a ferruginous submarginal spot in the apex, which is posteriorly lost in the ground-colour. From the Aconquija Mountains near Tucuman, North Argentina.

57. Genus: **Panarche** *Thieme.*

This genus may be regarded as a connecting link between *Corades* and *Polymastus*. As in *Corades*, the first median vein of the hindwing runs out into a long projecting point and the inner margin of this wing is as straight as in that genus. On the other hand it differs widely from *Corades* in the straight costal and angled distal margin of the forewing and the sharp, pointed teeth of the hindwing, in which respects it approximates more to *Polymastus*. It is, however, easily distinguished by the triangular hindwing, produced into a point at the inner angle, the species of *Polymastus* having the hindwing shorter and broader, with the inner margin rounded. The costal of the forewing is only slightly swollen. The 3 species are rare and are indigenous to the high mountains of Bolivia and Peru.

tricordatus. **P. tricordatus** *Hew.* (Corades t.). Forewing with 2 fine points in the anterior part of the distal margin, its posterior part obtusely dentate; anterior part of the hindwing also obtusely dentate, only the 3 median veins having long points, that of the first median projecting furthest. Above brown, distally lighter, the margins dark brown, forewing with white costal spot, hindwing with a submarginal row of black spots. Forewing beneath red-brown, striated with light yellow, the forewing at apex and the hindwing dark brown with white striation. The latter with several white spots, black margin and black submarginal band. From Mapiri and the Illimani, Bolivia.

callipolis. **P. callipolis** *Hew.* (Corades c.) (60 d). The teeth of the distal margin are not so pointed as in *tricordatus.* Above brown with dark margin. Forewing with a lighter brown submarginal band, proximally bordered by a dark brown dentate stripe, similar to that shown in the figure of the under surface in the middle of the forewing. From Bolivia (Illimani). For *callipolis Stgr.* cf. supra, p. 275, under *C. dymantis.*

anfortas. **P. anfortas** *Thieme* is larger than *callipolis,* the teeth of the hindwing longer. The ground-colour of the upper surface is cedar-wood brown. Basal area and distal margin of both wings dark brown. Beyond the middle of the wing is placed a row of dark brown spots, on the forewing elongate, on the hindwing round. In addition on the forewing 2 elongate spots in the cell and 2 round ones before the apex. Forewing beneath brown with silvery brown submarginal macular band, its proximal edge dentate. Hindwing beneath with brown discal band, before this a silvery half-band and distally a partly silvery, partly brown-dusted submarginal band. From Cuzco in Peru. Rare.

58. Genus: **Bia** *Hübn.*

An isolated genus, possessing various peculiarities. Palpus moderately long, thinly haired, the terminal joint thin and pointed. Eyes naked. Forewing with the costal and distal margins rounded. Hindwing produced at the inner angle into a point which projects far posteriorly and is placed on the first median vein. In the forewing the costal vein is strongly inflated at the base, the median and submedian less swollen. The cell of the forewing is longer at its posterior than at its anterior margin. On the hindwing there are two hair-tufts (scent-organs) in the ♂♂. One is placed in the inner-marginal fold and is composed of ochre-yellow hairs about 3 mm. in length, which may be erect and diverging or again convergent. The other, at the anterior margin of the cell, consists of short, erect, dark brown scales, which are partly covered by long, smoothly appressed, lighter brown and yellowish grey hairs. Inhabits Surinam and the whole Amazon region as far as Peru.

actorion. *decaerulea.* *atalanta.* **B. actorion** *L.* (60 e). The bright iridescent blue spot at the inner margin of the forewing in the ♂♂ varies in size, in single examples from the Upper Amazon it occupies almost the whole distal margin, in others it is very small or entirely disappears. In the ♀ on the other hand the whole basal half of the forewing nearly to the costal margin is bright iridescent blue. Under surface red-brown, densely covered almost all over with fine light brown or yellowish brown undulate lines. Below the apex of the forewing close to the distal margin is placed a small black ocellus with blue pupil. From Cayenne, Para and the whole Amazon region. The form **decaerulea** *Stgr. i. l.* (60 e) shows no trace of blue reflection, on the other hand the brownish yellow band is somewhat broader. It occurs among the type-form. — **atalanta** *Rebel* (60 e), on the contrary, has on the hindwing a very bright dark blue reflection, occupying nearly all the posterior half of the wing. The forewing is without reflection and the brownish yellow band is very narrow. The under surface as in *actorion.* Peru.

Additions and Corrections

to the American *Satyridae.*

theodori. *apoxyomenes.* P. 182. **Antirrhaea theodori** *Fruhst.* is a form of *philaretes* only described in the female, in which, instead of the 4 blue spots which *philaretes* ♀ has on the upperside of the hindwing, only 2 are present, and these are pale grey. The under surface is exactly as in *philaretes.* From the Upper Waupes (North Brazil). — **A. apoxyomenes** *Fruhst.* approaches *avernus Hpffr.*, but is larger, with broader yellow-white bands on the forewing and more extended blue spotting on the hindwing. Bolivia.

P. 183. *Sinarista adoptiva Weym.* The ♀ of this species has been found by Fassl likewise in the Colombian West Cordilleras, in the Rio Aguaca Valley, at 2000 m. It is but little larger than the ♂, but, like the ♀♀ of *Ant. geryon* and *geryonides,* has broader wings, so that the apex of the hindwing is obtusely rectangular. The point of the tail directed more distally. The ground-colour is somewhat lighter brown, the eye-spots of the forewing are larger, have thicker white pupils and are bordered by obscure red-brown rings. At the costal margin there is further a fourth, small, pupilled ocellus. The under surface is red-brown with a broad band, striated with dark brown, across the middle of both wings. In the distal area 4 white dots on the forewing and one on the hindwing.

protonoë. In *Caerois chorinaeus F.* the ♀ is about 3 cm. larger than the ♂. — **protonoë** *Fruhst.* is a form of *chorinaeus* in which the male also is larger than the type-form and much darker both above and beneath. Peru.

P. 184. **Tisiphone hyrnethia** *Fruhst.* (Manataria hercina h.), a form of *hercyna*, has the whitish yellow macular band of the forewing so much widened that it occupies nearly a third of the wing and covers the anterior half of the cell. The under surface is lighter than in the type-form and has the white spots more than twice as broad and only in part isolated. Peru and Bolivia. *hyrnethia.*

P. 188. **Taygetis weymeri** *Draudt* should be inserted before *andromeda*, with which the shape of the hindwing agrees, while the shorter forewing is shaped like that of *sosis Hpffr.* Above olive-brown. Forewing with an indistinct brown stripe beyond the middle and both wings with a dark brown distal border 2½ mm. in breadth, before the distal margin a white line, the fringes long, whitish grey with brown dots at the extremities of the veins. The under surface resembles that of *keneza* and *uncinata*, but the dark band before the middle of both wings is scarcely indicated, and the band behind the middle has no sharp angles. The eye-spots are scarcely perceptible on the forewing, on the hindwing they are distinct but very small and mostly free, while in *keneza* they are all placed on brown spots. But the species is easy to recognize by the non-angled forewing. From Guerrero, West Mexico. Flies in August and September. *weymeri.*

P. 192,	line	17	from below,	for	*reinoldsi spec. nov.*	read	*reynoldsi E. Sharpe.*
.. 206,	,,	2	,, above,	,,	*bonariensis*	,,	*bonaërensis.*
.. 208,	,,	21	,, below	,,	*spartaeus*	,,	*spartacus.*
.. 219,	,,	24	,, above,	,,	*sericella*	,,	*sericeella.*
. 221,	,,	1	,, ,,	,,	*agaya*	.,	*ayaya.*
.. 234,	,,	6	,, ,,	,,	*milesi*	,,	*nilesi.*

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with reference to the original descriptions of the forms of the American *Satyridae*.

*) signifies that the form is also figured at the place cited.

abretia Eu. *Capr.* Ann. Ent. Soc. Belg. 17, p. 31. * p.205.
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affinis Eu. *Btlr.* Proc. Zool. Soc. Lond. 1866, p. 469. * p.204
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alberta Oen. *Elw.* Trans. Ent. Soc. Lond. 1893, p. 467. p.231
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vulpecula Eteon. *Weym.* Stett. Zg. 55, p. 323. p.244

wallengrenii Neom. *Btlr.* Trans. Ent. Soc. Lond. 1881, p. 456. * p. 286
westwoodi Eu. *Btlr.* Proc. Zool. Soc. Lond. 1866, p. 481. p. 195.
weymeri Tayg. *Draudt*, Faun. Exot. 1, p. 61. * p. 277.
wheeleri Cerc. *Edw.* Trans. Amer. Ent. Soc. 4, p. 343. p. 229.
whitelyi Pol. *Druce*, Proc. Zool. Soc. Lond. 1876, p. 215. * p. 264
williamsianus Cosm. *Btlr.* Catal. Satyr. Br. Mus., p. 159. * p. 233

xanthippe Tayg. *Btlr.* Catal. Fabr., p. 11. p. 186.
xenana Tayg. *Btlr.* Lep. Exot. 1. * p. 189.
xicaque Param. *Reak.* Proc. Ac. Nat. Sci. Phil. 1866, p. 336. p. 226.

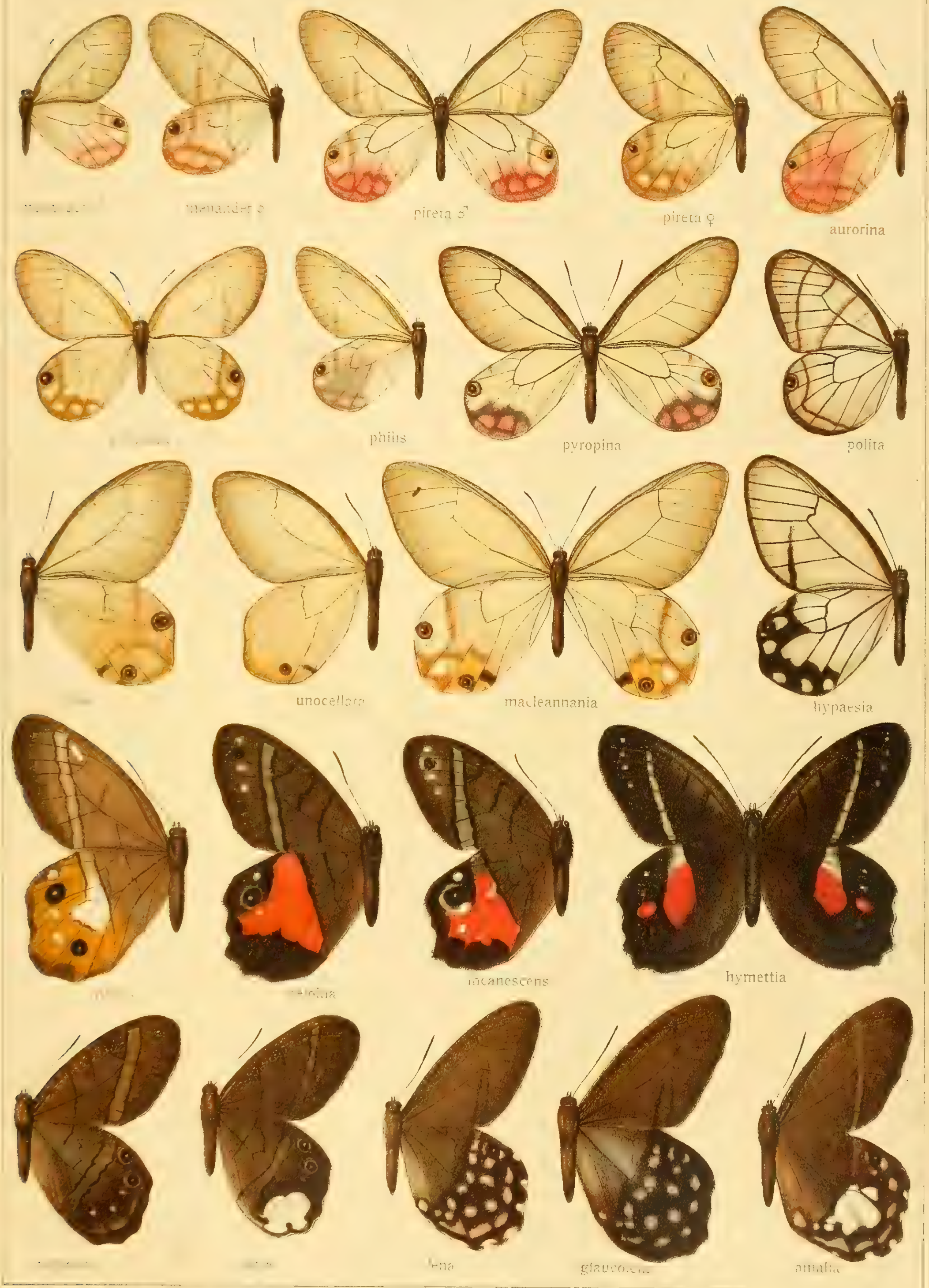
youngi Ereb. *Holl.* Entom. News, 11, p. 388. p. 238.
yukonensis Coen. *Holl.* Entom. News, 11, p. 386. p. 227.

yphthima Eu. *Fldr.* Novara Lep. (3), p. 481. p. 209.
ypthima Tayg. *Hbn.* Smlg. Exot. Schmett. * p. 186.

zangis Cal. *F.* Syst. Ent. p. 486. p. 240
zapatoza Las. *Westw.* Gen. Diurn. Lep., p. 358. p. 265
zarathustra Las. *Thieme*, Berl. Ent. Zeitschr. 51, p. 124. * p. 265.
zeba Eu. *Btlr.* Lep. Exot. 1. * p. 211.
zeredatha Eu. *Btlr.* Lep. Exot. 1. pl. 4. * p. 208.
zibia Sterom. *Btlr.* Cistul. Entom. 1, p. 23. p. 241.
zigomala Zab. *Hew.* Equat. Lep., p. 92. p. 244.
zimri Tayg. *Btlr.* Lep. Exot. 1. * p. 191.
zippora Tayg. *Btlr.* Lep. Exot. 1. * p. 190.
ziza Eu. *Btlr.* Lep. Exot. 1. pl. 4. * p. 217.

zoippus Ped. Druce. P.Z.S. 1876. p. 214. n. 5. t. 18. f. 1. p. 258

CALLITAERA - PIERELLA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pireta ♂
pireta ♀
aurorina
b
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pyropina
polita
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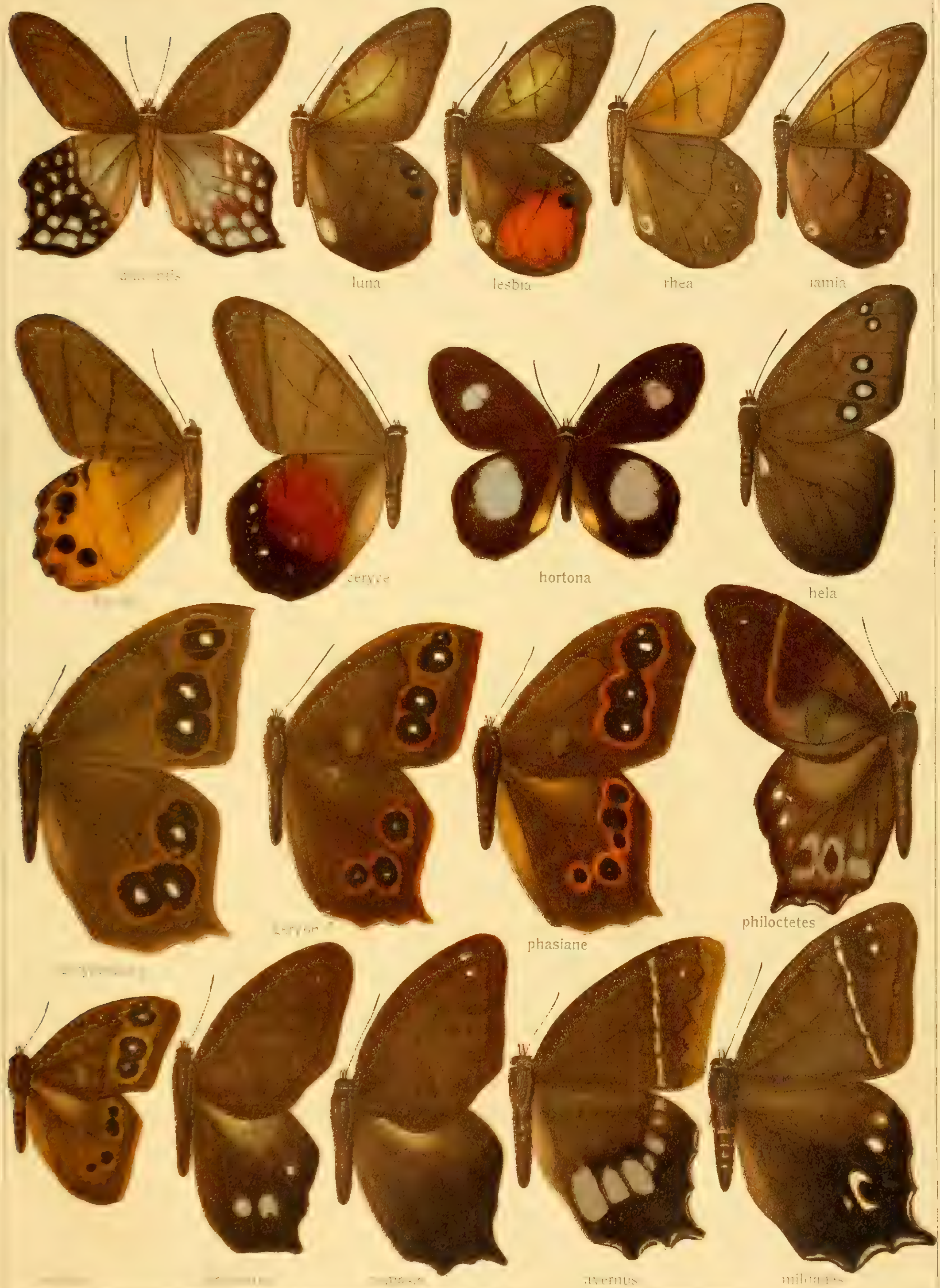
unocellata
macleannania
hypaesia
d
[illegible]
[illegible]
incanescens
hymettia
e
[illegible]
[illegible]
lena
glaucolena
amalia

PIERELLA - ANTIRRHAEA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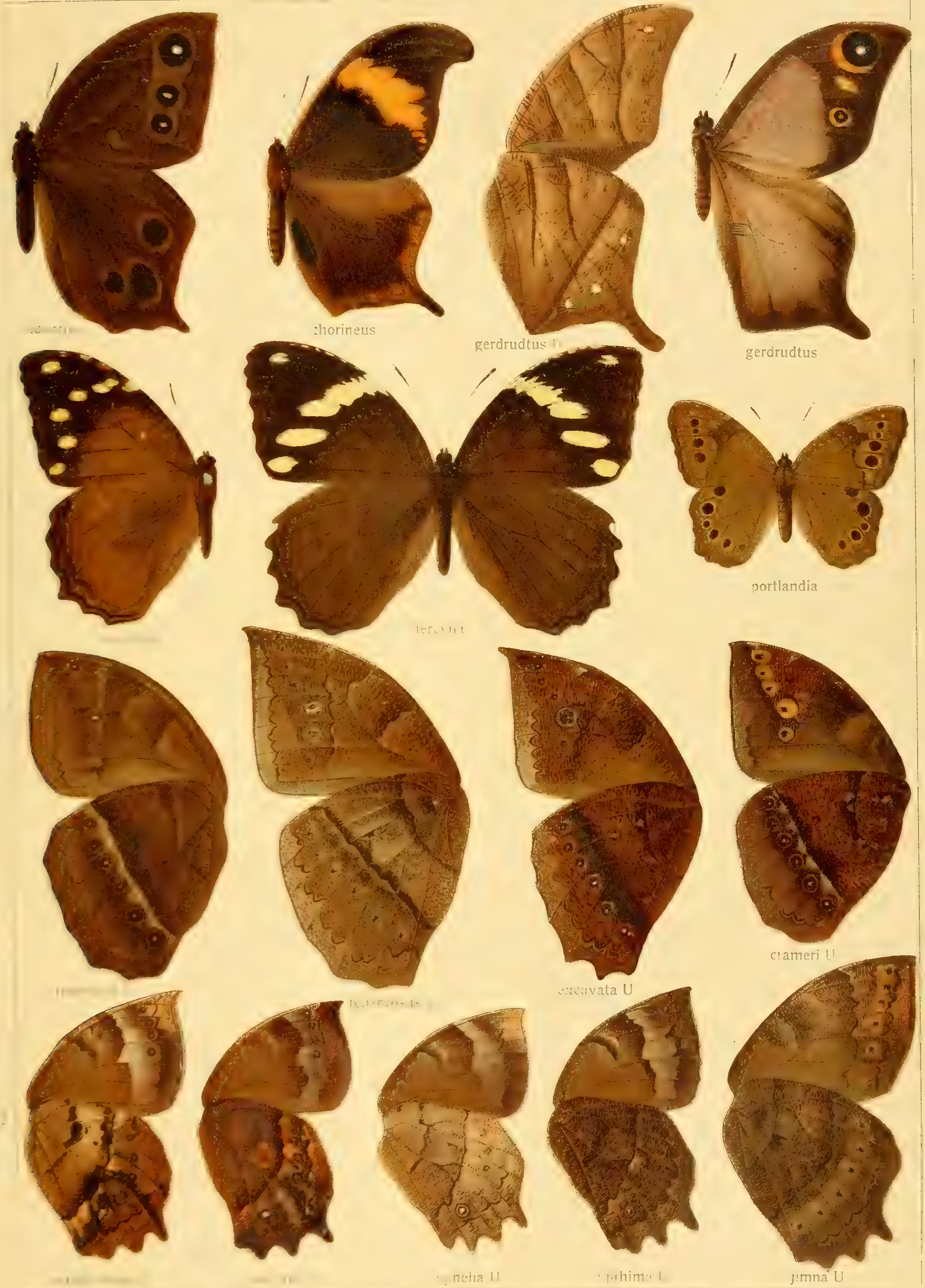
avernus

SINARISTA - TAYGETIS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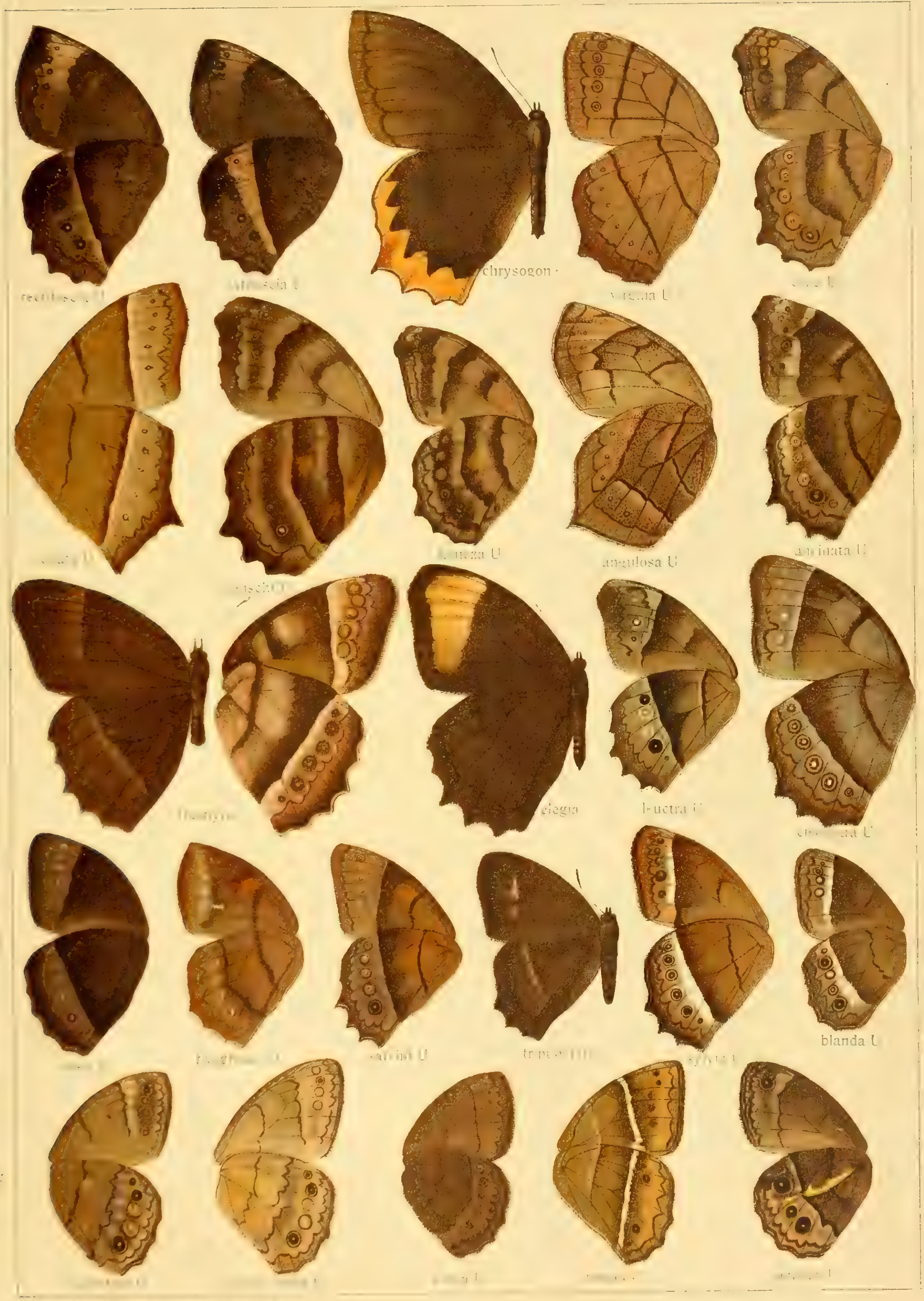
portlandia
crameri U
excavata U
neha U
pthima U
mnna U

TAYGETIS - EUPTYCHIA


a
chrysogon
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b
diegia
blanda U

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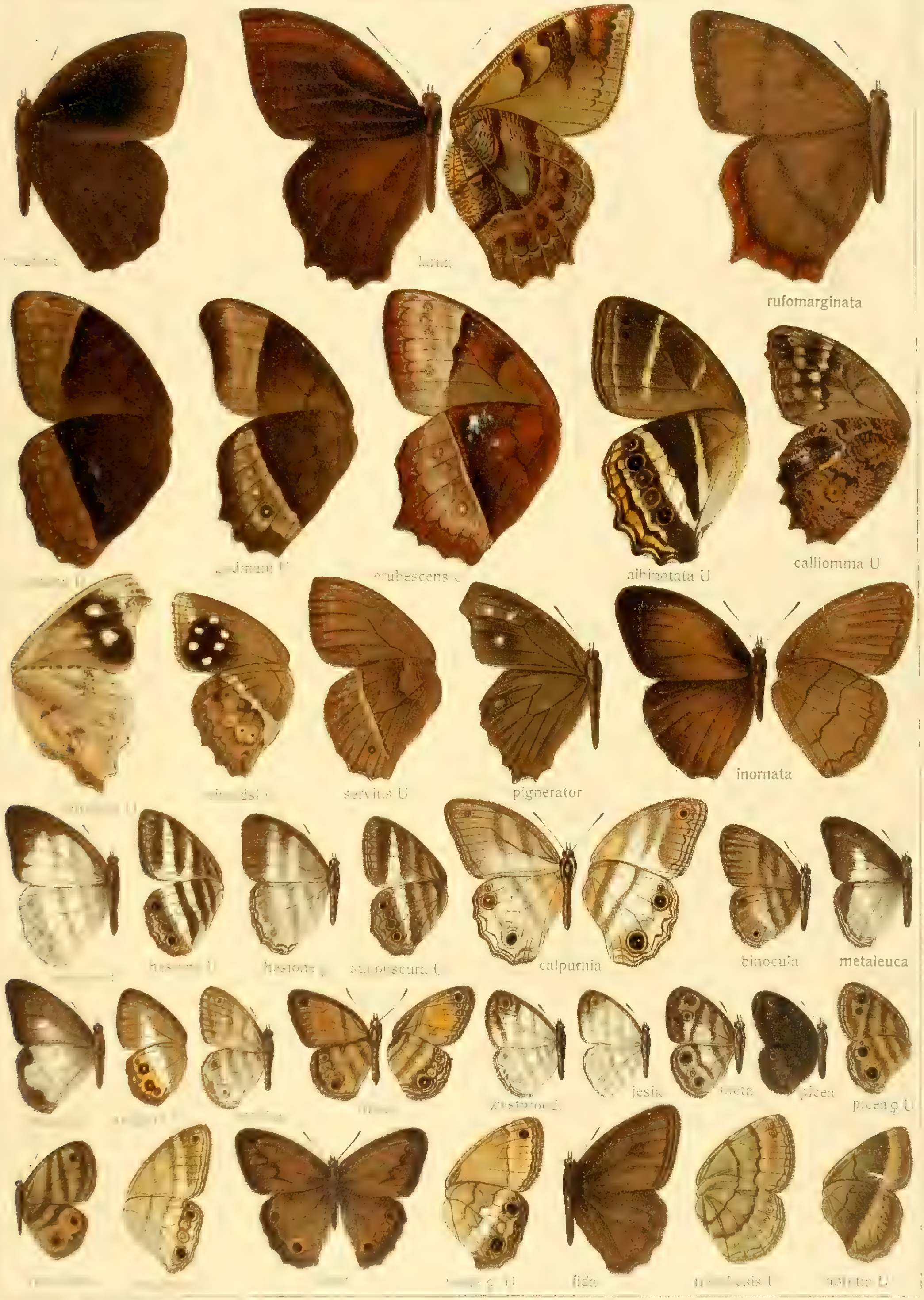
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erubescens
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calliomma U
servius U
pignerator
inornata
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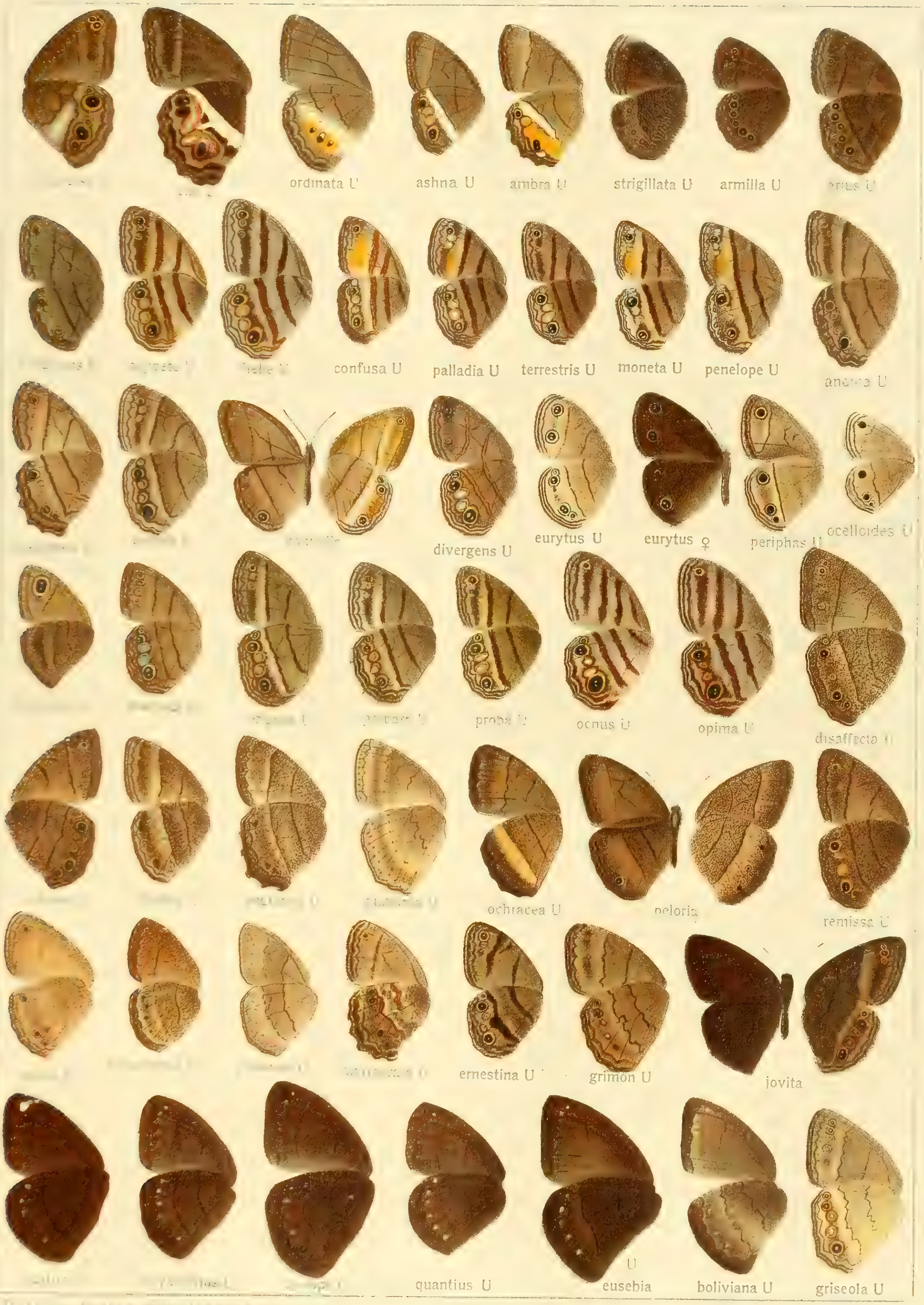
metaleuca
westwoodi
jesia
picea
picea ♀ U
fida

EUPTYCHIA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penelope U
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eurytus U
eurytus ♀
periphas U
ocelloides U
proba U
ocnus U
opima U
disaffecta U
ochracea U
peloria
remissa U
ernestina U
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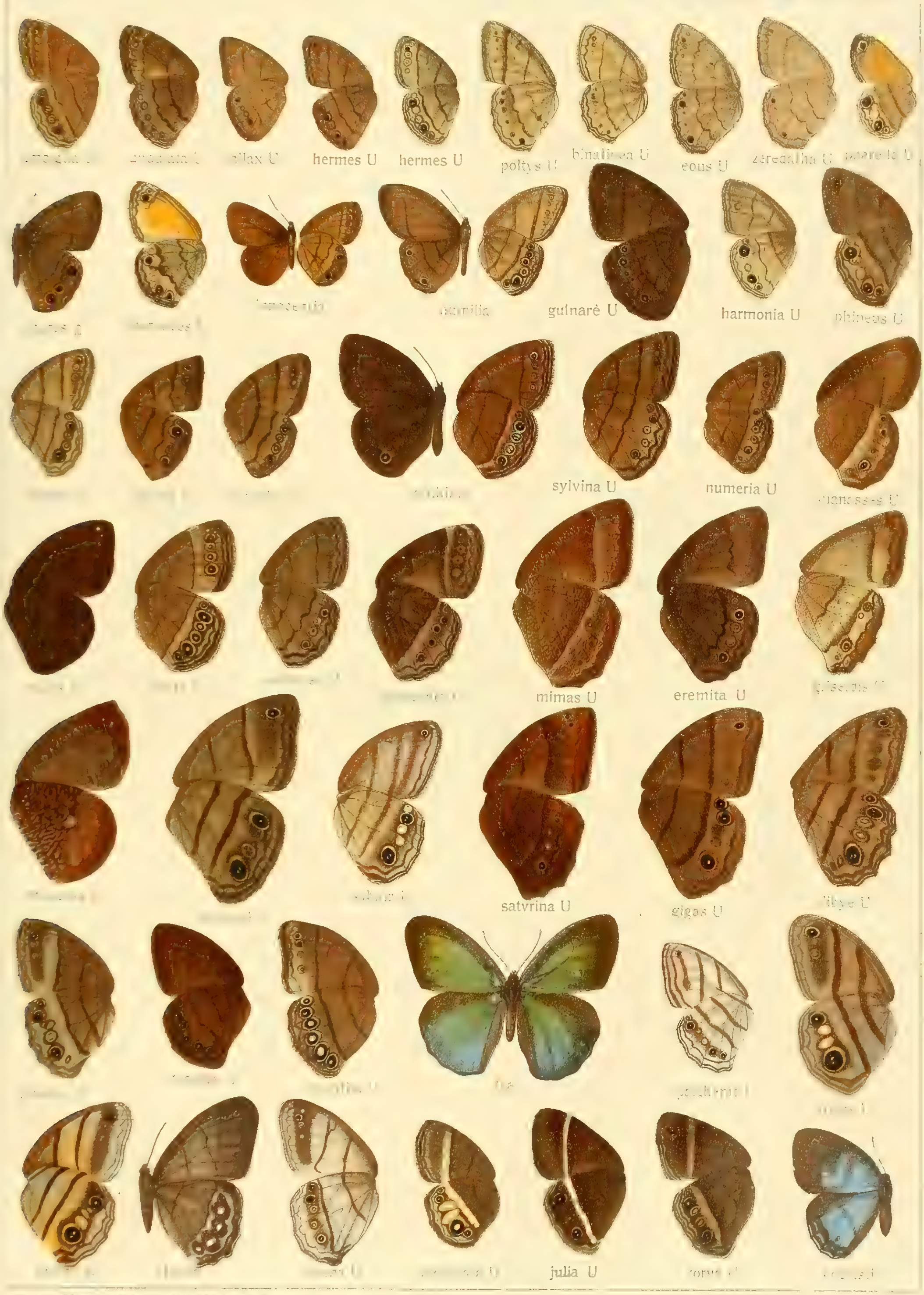
jovita
quantius U
U
eusebia
boliviana U
griseola U

EUPTYCHIA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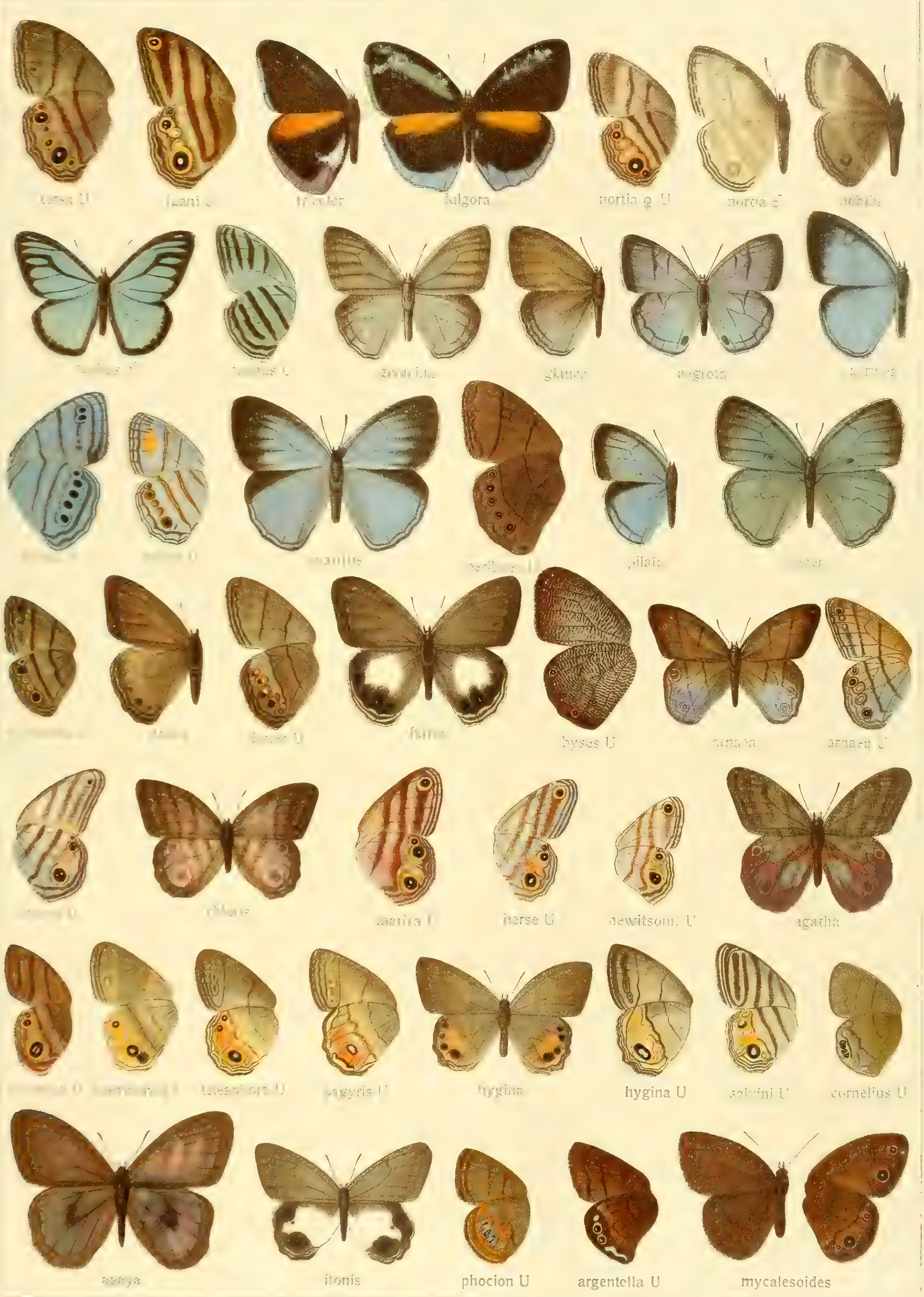
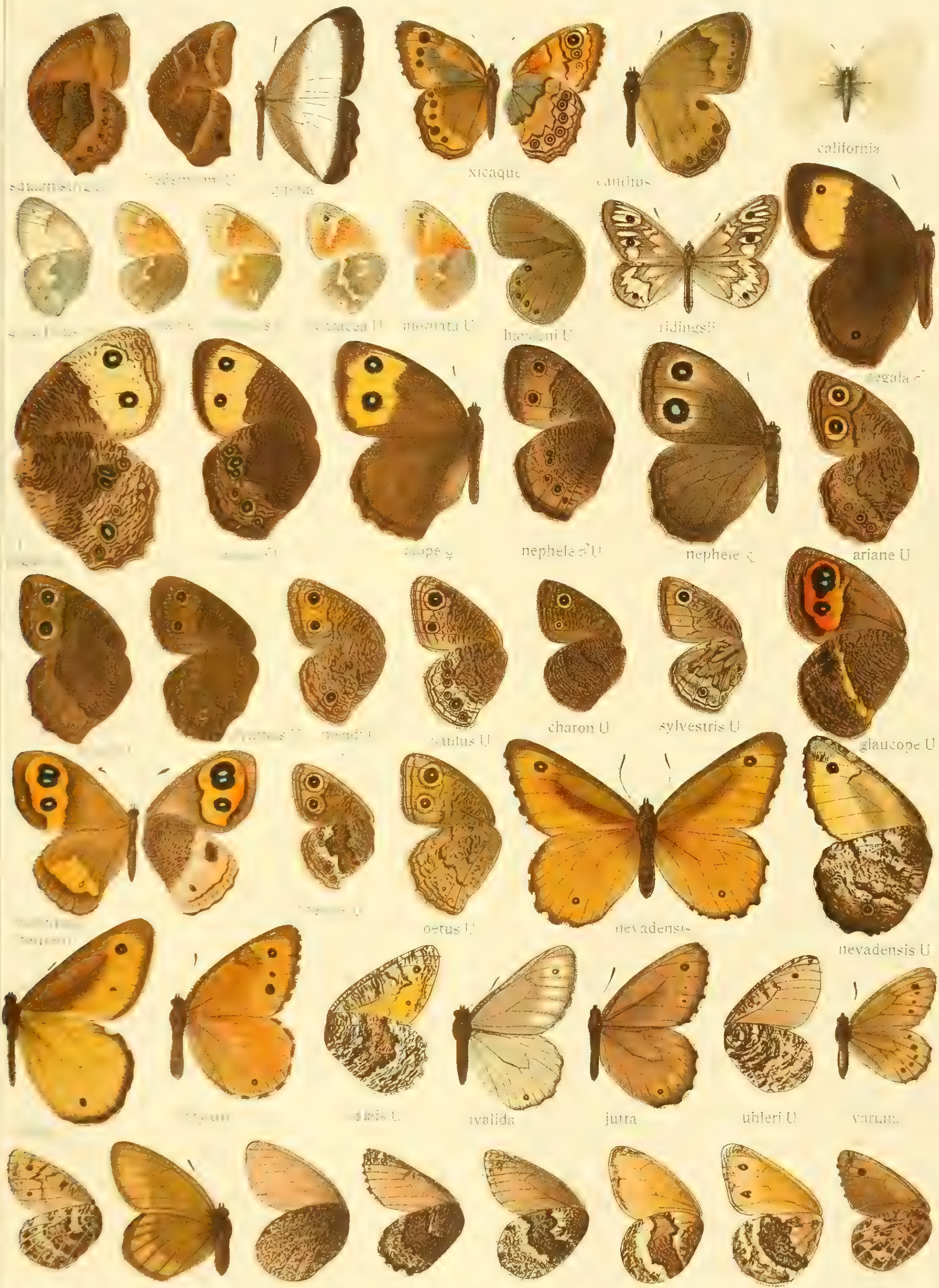
poltys U
binalinea U
eous U
zeredatha U
innocentia
gulnarè U
harmonia U
phineus U
sylvina U
numeria U
mimas U
eremita U
satyrina U
gigas U
libye U
julia U

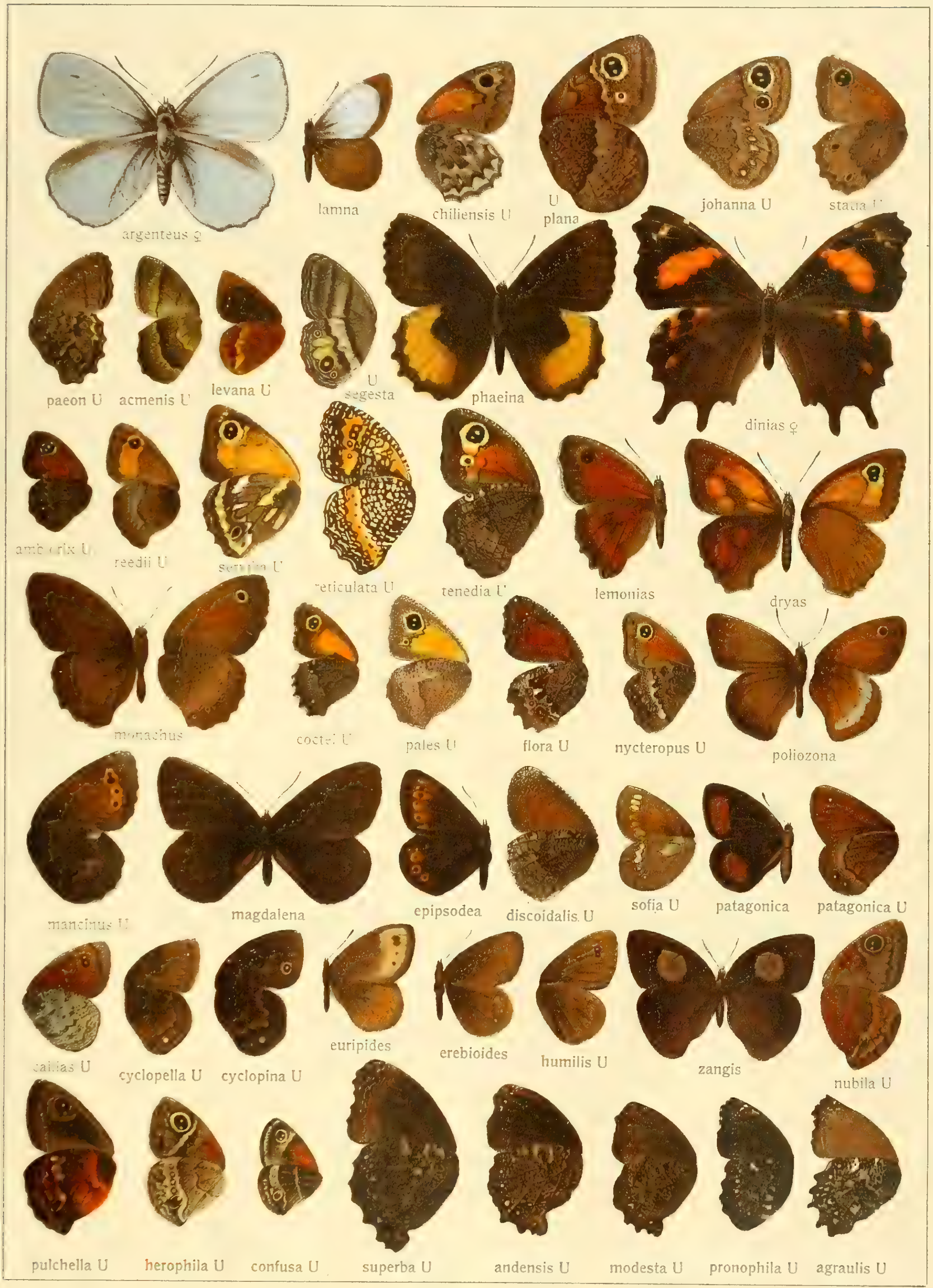
EUPTYCHIA


tricolor
fulgora
portia ♀ U
glauce
aegrota
byses U
arnaea
arnaea U
herse U
hewitsoni U
agatha
hygina
hygina U
salvini U
cornelius U
itonis
phocion U
argentella U
mycalesoides

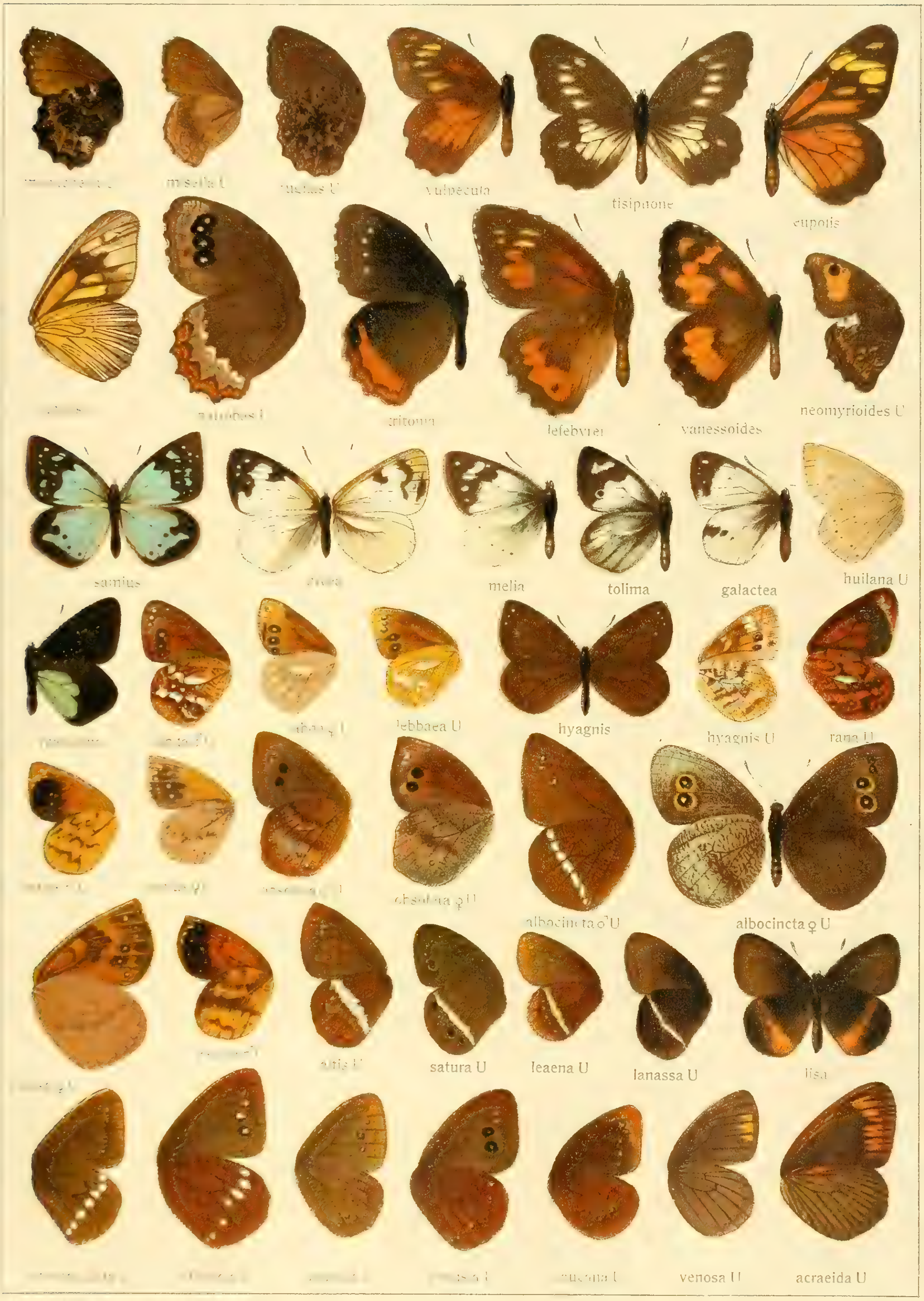
PINDIS - COSMOSATYRUS


xicaque
canthus
california
ridingsii
regala ♂
nephele ♂ U
nephele ♀
ariane U
charon U
sylvestris U
glaucope U
oetus U
nevadensis
nevadensis U
ivalida
jutta
uhleri U
varuna
subhyalina U
semidea U
brucei U
katahdin ♂ U
katahdin ♀ U
sajama U

ARGYROPHORUS - PSEUDOSTEROMA


a
argenteus ♀
lamna
chiliensis U
U plana
johanna U
statira U
b
paeon U
acmenis U
levana U
U segesta
phaeina
dinias ♀
c
ambiorix U
reedii U
semira U
reticulata U
tenedia U
lemonias
dryas
d
monachus
coctei U
pales U
flora U
nycteropus U
poliozona
e
mancinus U
magdalena
epipsodea
discoidalis U
sofia U
patagonica
patagonica U
f
callias U
cyclopella U
cyclopina U
euripides
erebioides
humilis U
zangis
nubila U
g
pulchella U
herophila U
confusa U
superba U
andensis U
modesta U
pronophila U
agraulis U

PSEUDOSTEROMA - LYMANOPODA 52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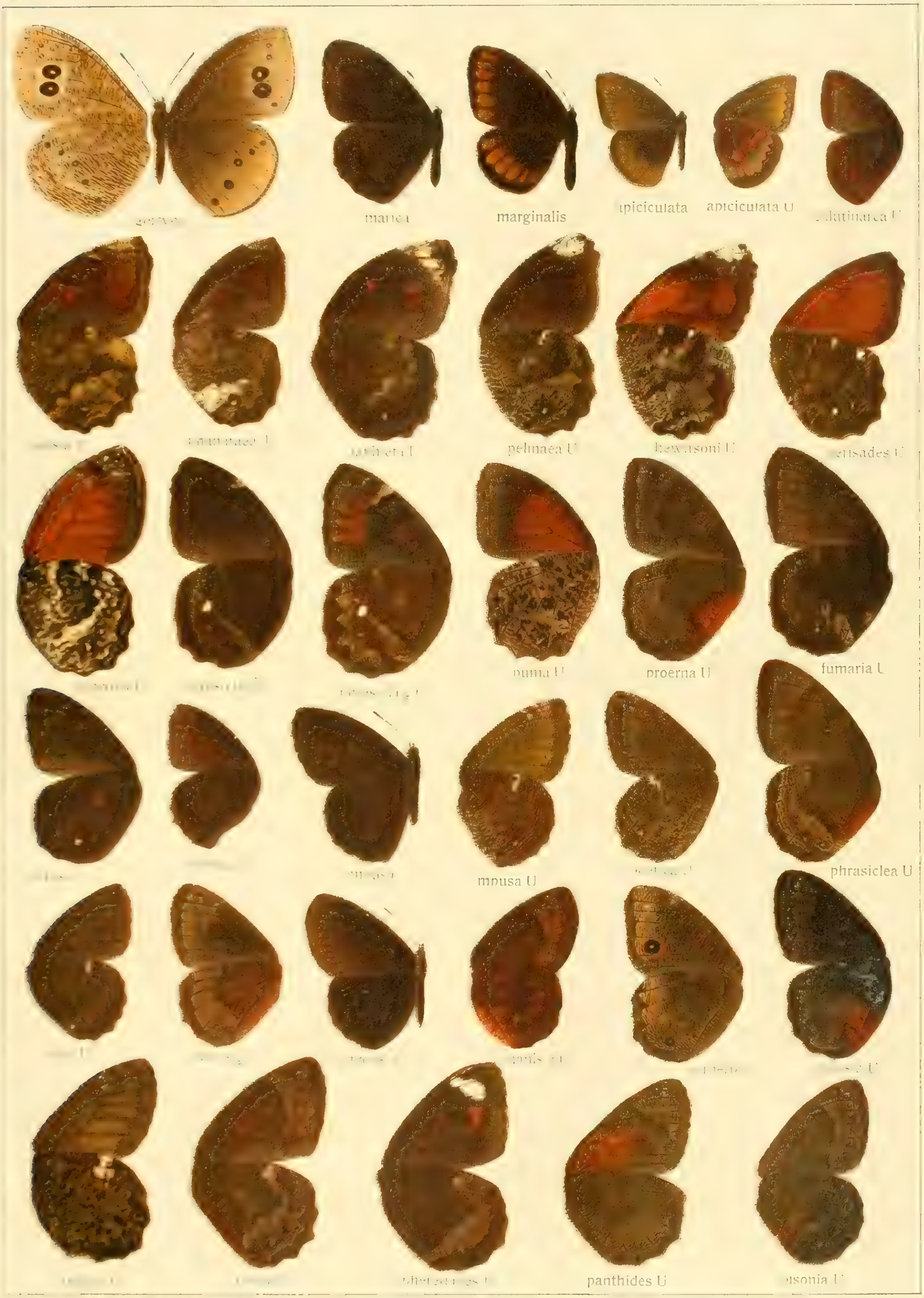
tisiphone
eupolis
tritonia
lefebvrei
vanessoides
neomyrioides U
samius
melia
tolima
galactea
huilana U
lebbaea U
hyagnis
hyagnis U
rana U
albocincta ♂ U
albocincta ♀ U
satura U
leaena U
lanassa U
venosa U
acraeida U

LYMANOPODA - PEDALIODES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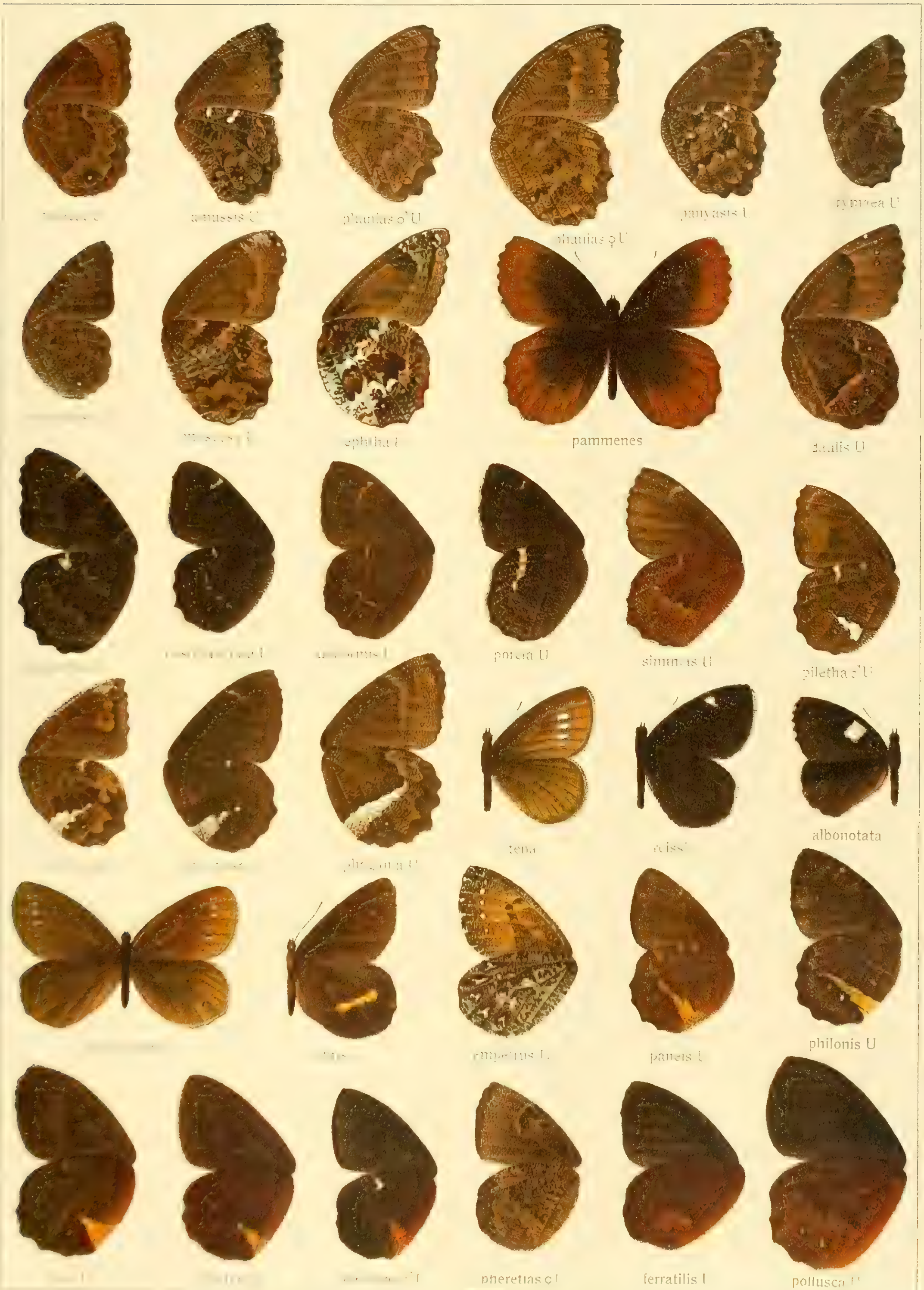
apiciculata
apiciculata U
latinarca U
pelinaea U
hewitsoni U
puma U
proerna U
fumaria U
empusa U
phrasiclea U
panthides U
isonia U

PEDALIODES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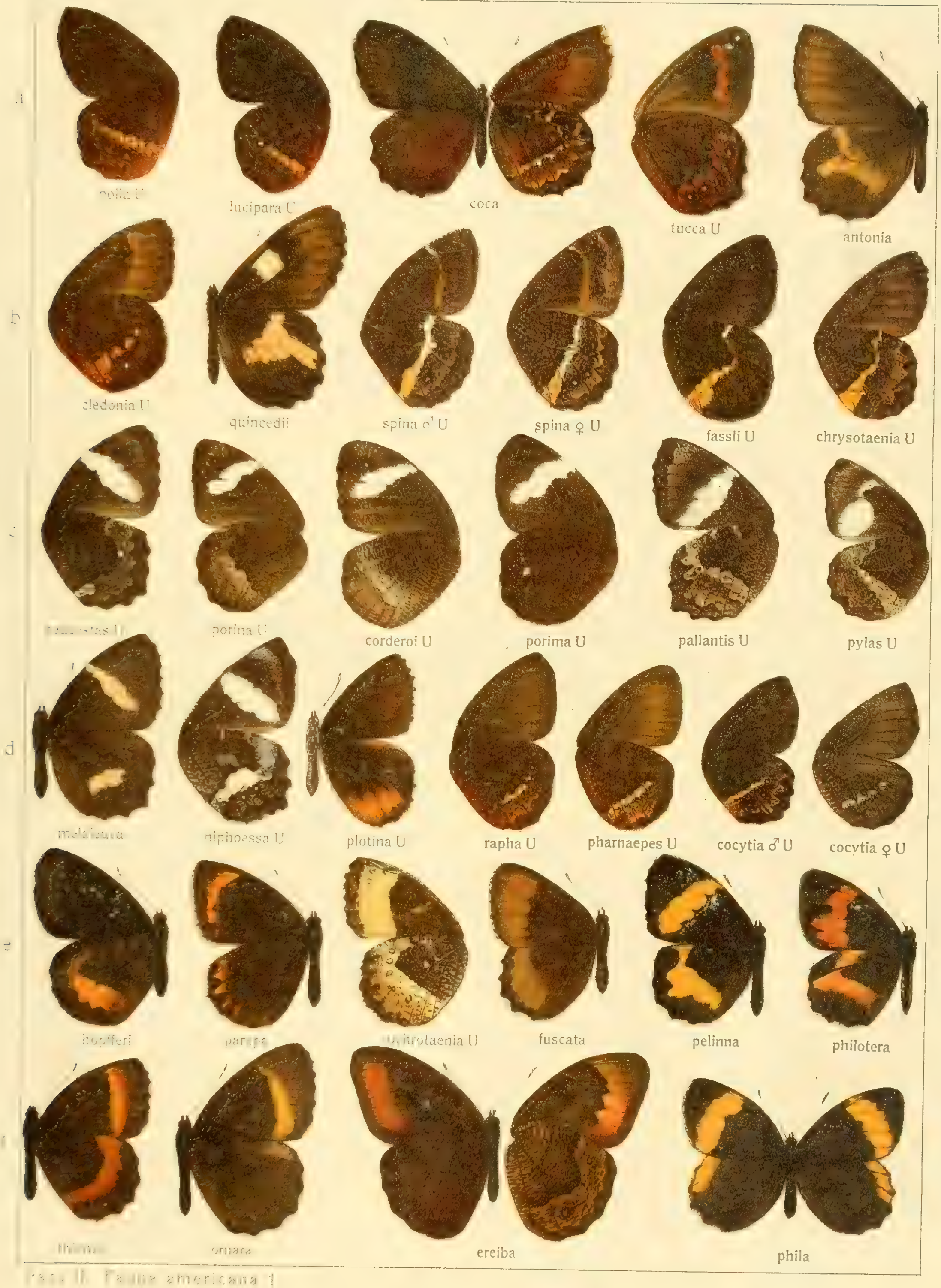
phanias ♂ U
panyasis U
phanias ♀ U
ephitha U
pammenes
porcia U
simmias U
piletha ♂ U
albonotata
reissi
philonis U
empetrus U
paneis U
pheretias ♀ U
ferratilis U
pollusca U

PEDALIODES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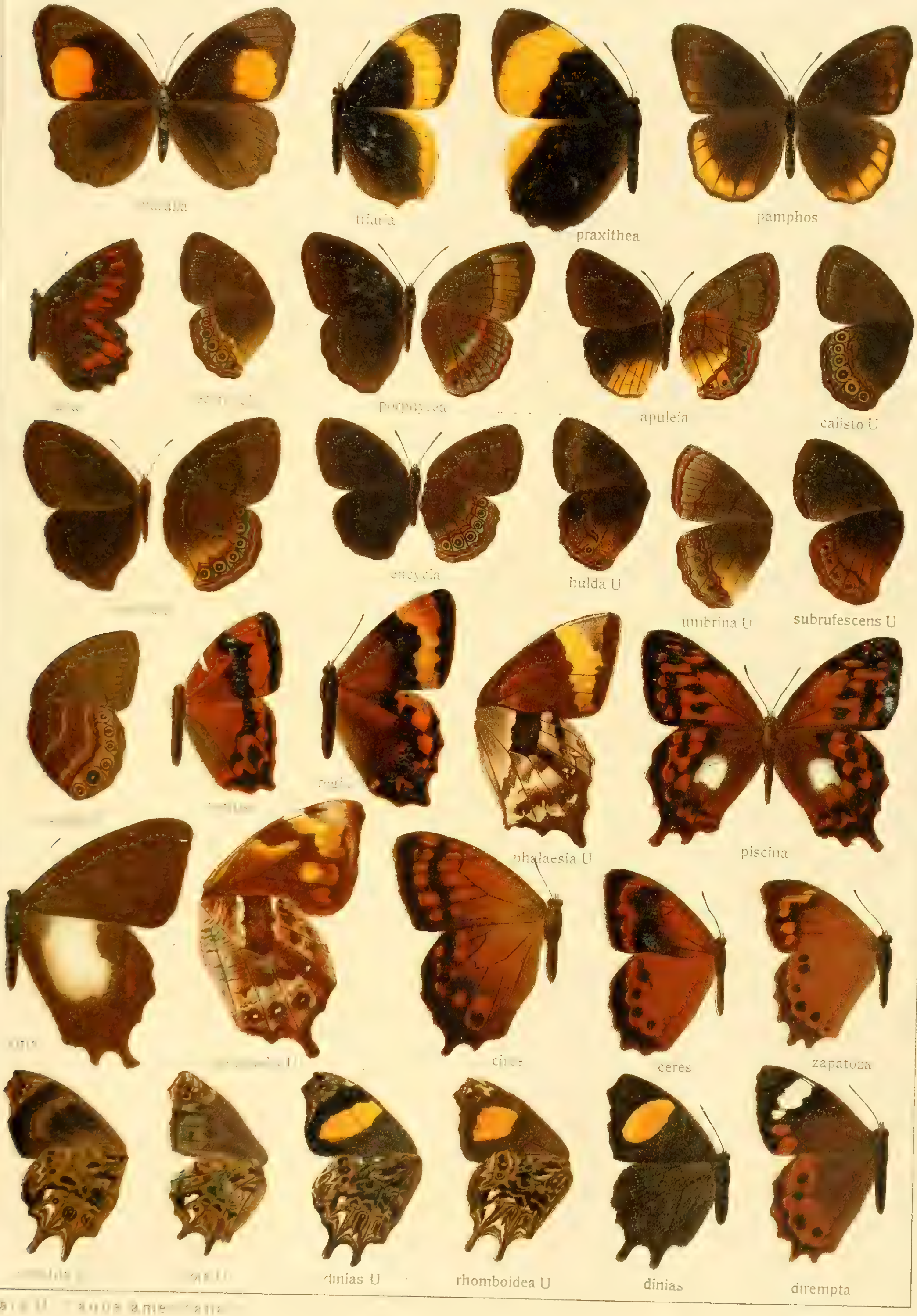
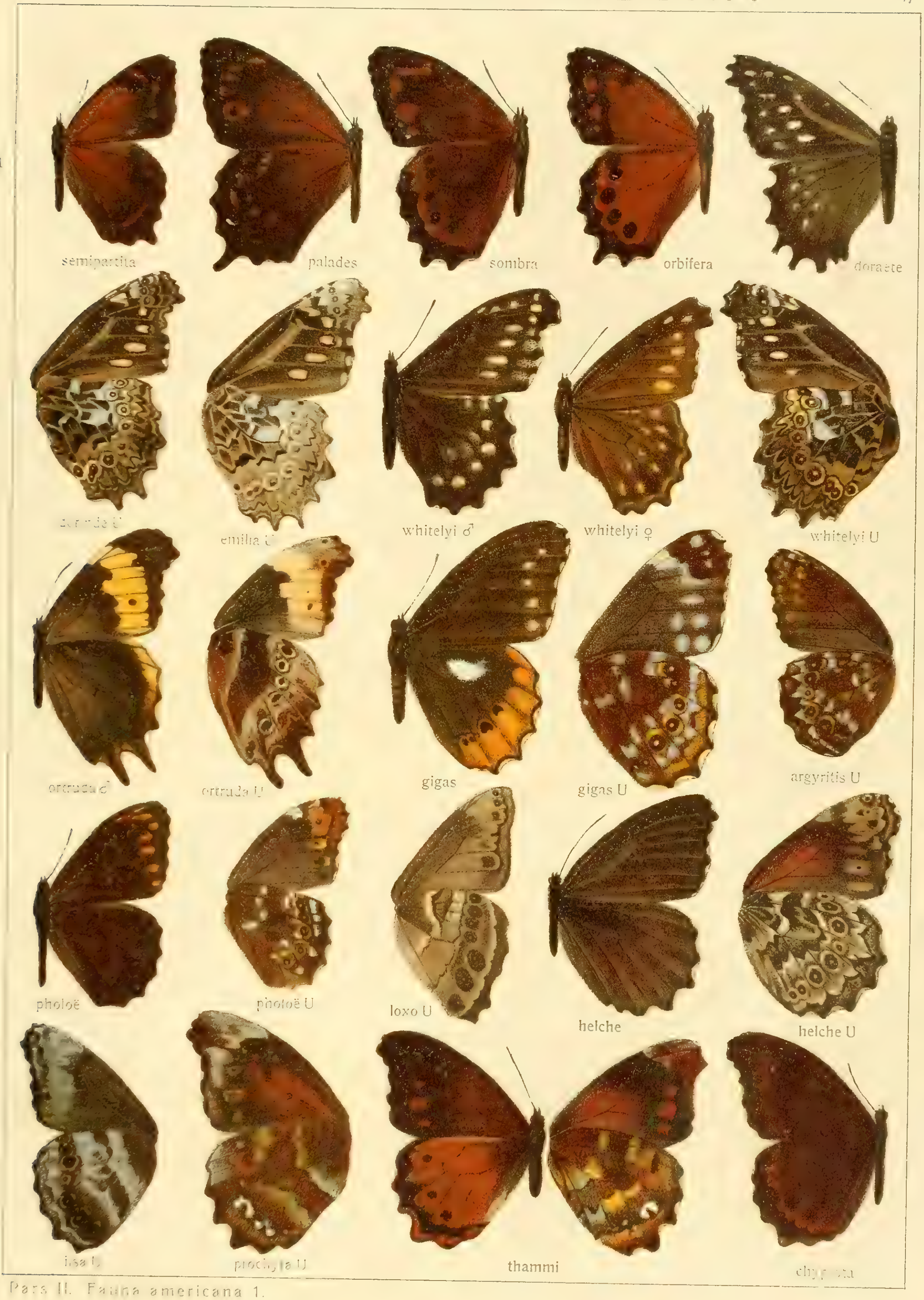
polla U
lucipara U
coca
tucca U
antonia
b
cledonia U
quincedii
spina ♂ U
spina ♀ U
fassli U
chrysotaenia U
c
peucestas U
porina U
corderoi U
porima U
pallantis U
pylas U
d
melaleuca
niphoessa U
plotina U
rapha U
pharnaepes U
cocytia ♂ U
cocytia ♀ U
e
hopfferi
parepa
ochrotaenia U
fuscata
pelinna
philotera
f
thiemei
ornata
ereiba
phila

PEDALIODES - LASIOPHILA

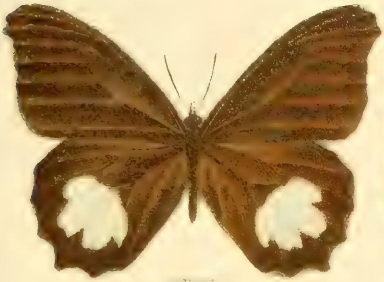

triaria
praxithea
pamphos
porphyrea
apuleia
calisto U
encycla
hulda U
umbrina U
subrufescens U
phalaesia U
piscina
circe
ceres
zapatoza
dinias U
rhomboidea U
dinias
dirempta

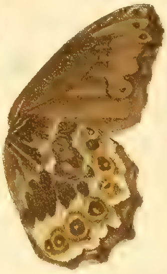
LASIOPHILA - MYGONA


a
semipartita
palades
sombra
orbifera
doraete
b
[illegible] U
emilia U
whitelyi ♂
whitelyi ♀
whitelyi U
c
ortruda ♂
ortruda U
gigas
gigas U
argyritis U
d
pholoë
pholoë U
loxo U
helche
helche U
e
lisa U
prochyta U
thammi
chy[illegible]ta

MYGONA-OXEOSCHISTUS

a


mena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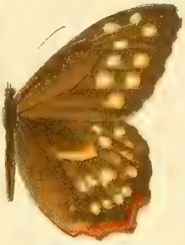
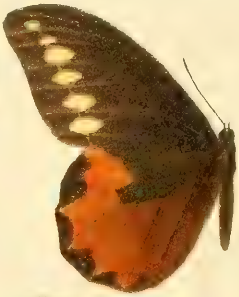
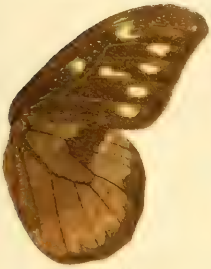

schreineri


leonata

b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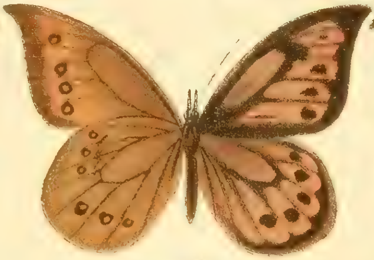
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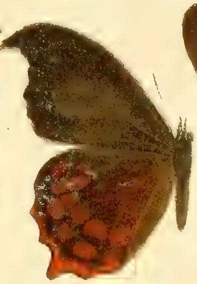
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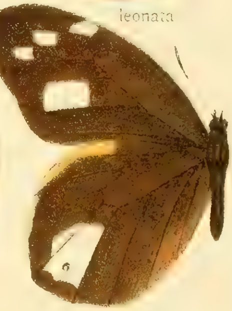
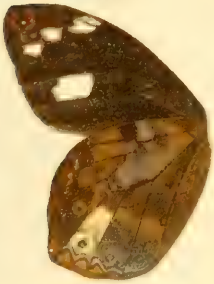

venerata

c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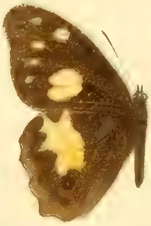
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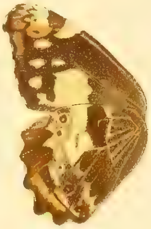
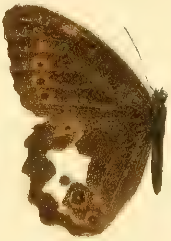
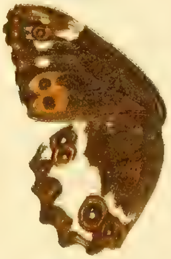
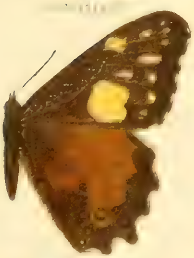

cothon U


pugil


leucospilos U

d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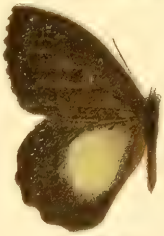
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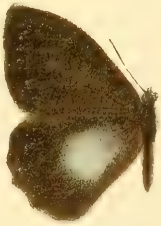
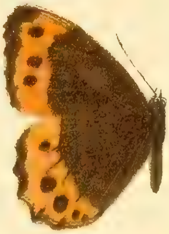

spoliatus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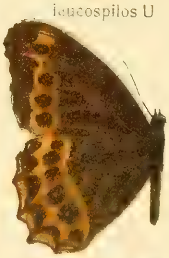
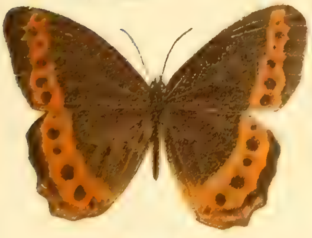

triplex

e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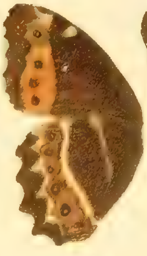
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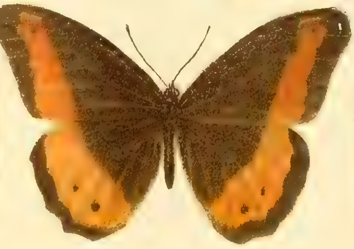
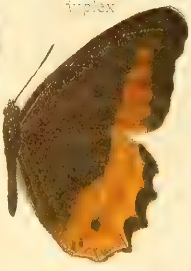
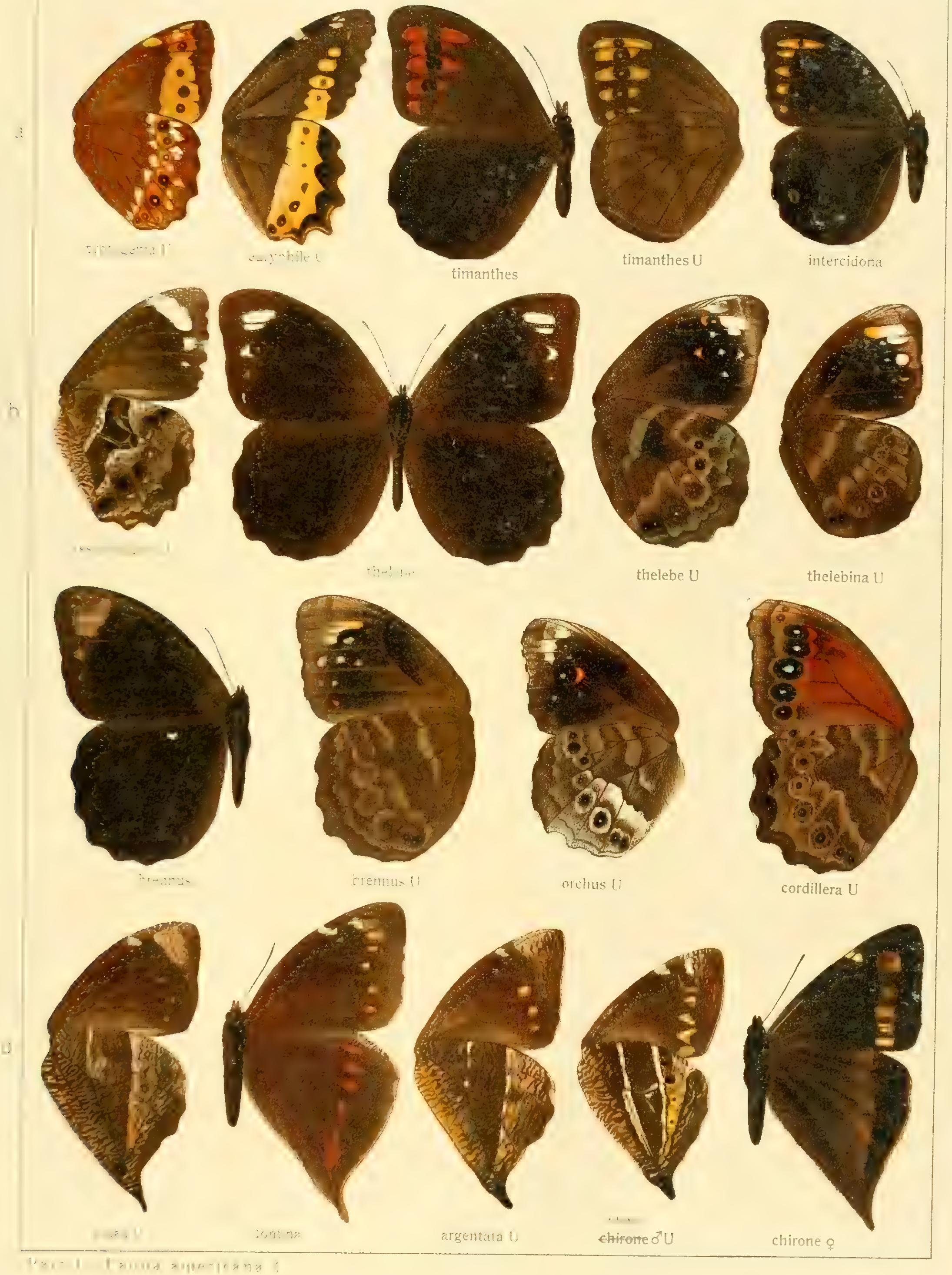
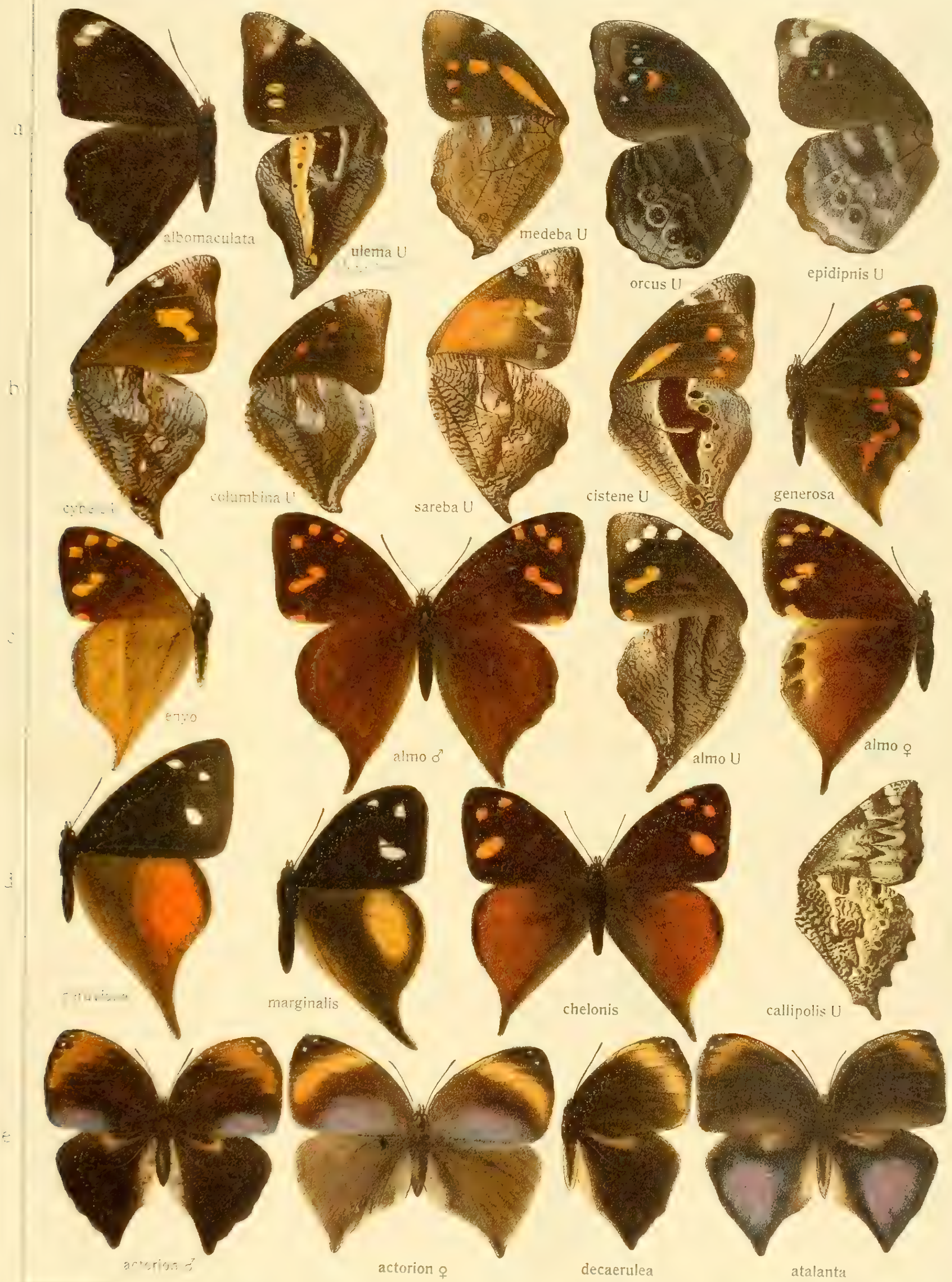

puerta


submaculatus

OXEOSCHISTUS - CORADES


a
cybele U
timanthes
timanthes U
intercidona
b
thelebe
thelebe U
thelebina U
brennus
brennus U
orchus U
cordillera U
d
iduna
argentata U
chirone ♂ U
chirone ♀

CORADES - BIA


a
albomaculata
ulema U
medeba U
orcus U
epidipnis U
b
cybele U
columbina U
sareba U
cistene U
generosa
c
enyo
almo ♂
almo U
almo ♀
d
peruviana
marginalis
chelonis
callipolis U
e
actorion ♂
actorion ♀
decaerulea
atalanta

5. Family: **Brassolidæ.**

The genera of this subdivision of the Nymphalids *sens. lat.* belong exclusively to the Neotropical faunistic region. Representatives of the family are entirely absent in the Ethiopian Region, on the other hand they stand in surprisingly close relationship to the Indo-Australian Amathusiids, which were formerly called "Morphids of the Old World", but would be more correctly regarded as "Brassolids of the Old World". Indeed Amathusiids and Brassolids have so much in common that it will probably be only a question of time to see them united, and like their Indian allies their extremes in one direction approach the Satyrids (*Opoptera*), while others form a transition to the Nymphalids (*Narope*). — In the anatomy of the clasping-organs they are much more closely allied to the Satyrids than to the Neotropical Morphids, with which they were formerly united. Especially suggestive of the Satyrids are the slender, dentate valve and the pointed uncus (*Opsiphanes*) with its delicate lateral clasps, though the uncus of one genus (*Dynastor*) rather recalls the Morphids. But whatever we adduce by way of comparison we find the characters fluctuating; thus also the strongly developed precostal, to which Dr. SCHATZ attached so much importance, the beginning of which we find again in the Morphids and which on the other hand in the Brassolid genus *Caligo* begins to disappear. At the same time the Brassolids can be definitely separated from the Morphids by having the cell of the hindwing closed, in which they also differ from the Amathusiids, where the discocellular is only exceptionally present or is only rudimentary.

The relations of the Brassolids to the neighbouring families are of different kinds. From the Nymphalids in the restricted sense, which the antennae and the neuration of the forewing suggest, they are separated by the ocellated markings on the under surface, by the palpi, and before all by the quite different larvae, which bring them nearer to the Satyrids. From *Morpho*, with which they were formerly united, they differ especially in the elongate, naked larva, which lives on Monocotyledons, and bears no resemblance to the short, woolly, Dicotyledon-feeding larvae of *Morpho*. From the Satyrids, which they approach in the shape of the larvae, the Brassolids are separated chiefly by the gigantic size (*Caligo*), the thickness of the body (*Brassolis*) and the structure of REUTER's "basalfleck"; in addition the veins of the forewing are not inflated at the base.

All the Brassolids agree in the brilliant eye-spots on the finely striated under surface, which are most strongly developed in *Caligo*. Only in the genus *Narope* is this character indistinct, the eye-spots being entirely absent or reduced to dots.

With the exception of one genus (*Narope*) the Brassolids embrace almost exclusively species which are either above medium size or even furnish us with the giants among the South American butterflies.

The colouring is as a rule dull, uniform and blurred, not rarely with blue and blue-green iridescent gloss; only a few species are brightly and sharply marked, while none have a very elaborate pattern. Nevertheless some species of the genus *Caligo* are among the most sought-after show specimens in collections, and the sight of a wonderful blue-tinged *Caligo beltrao* or of the amethyst-coloured *Caligo atreus* with its yellow ornamental bands is one of the most beautiful memories of a tropical traveller. They form a characteristic of the landscape when the sun-loving *Morpho* have long ceased their flight and as harbingers of the night they leave their hiding-places and take up their posts like isolated sentries at the edge of the evergreen forest. Even more than the Amathusiids the Brassolids prefer the dusk of the moist, hot primeval forest; only a few *Opsiphanes* occasionally even in the middle of the day are attracted by the so-called "Waldschenken" in the dry underwood (Capoeira) where they enjoy themselves at the sap flowing out of the bushes.

One genus (*Dasyophthalma*) can best be compared with Indian *Elymnias* or *Zeuxidia*, as its members make their appearance in the early hours of the day, fly up and down unsteadily several times, turning their iridescent blue or greenish upper surface for a moment to the spectator, but then again disappear slowly and mysteriously in the forest-gloom. They have also in common with the *Zeuxidia* a preference for overripe bananas, with which they can be baited in large numbers. They then sit in a living mass in company with *Caligo beltrao* or *Eryphanis reevesi* round the suspended fruit, mostly underneath it, with the wings closed, turning the ocelli to the spectator. When anyone approaches they begin to flap their wings restlessly, before taking to flight. Even the *Caligo* species, in spite of their great size, are difficult to detect in their day hiding-places when, accidentally startled up, they settle quite near the ground, concealing themselves either on it or on tree-trunks, as the peculiarly irrorated and reticulated under surface, readily fitting in and harmonizing with the aspect of the trunk, affords them complete protection in spite of their large "owlet-eyes".

Like all true forest species the Brassolids scarcely ascend above the actual zone of the densest vegetation. The species of *Caligo* and their nearest allies never exceed elevations of 1000 m. In their geographical range they agree entirely with the Morphids, not extending northwards beyond Mexico nor southwards beyond Rio Grande do Sul and Paraguay. Their headquarters are the eastern slopes of the Andes, especially the region of the source of the Amazon and also Colombia, from whence alone 30 species are known, thus only four less than from the whole of Brazil. Ecuador again has 28, Guiana 16, Central America 17 species.

The egg of the Brassolids is spherical, more or less sharply ribbed, occasionally somewhat flattened above and beneath (*Eryphanis*). Round the greatest circumference runs sometimes a narrow red-brown stripe.

Larva so far as known gregarious when young, afterwards often solitary, sometimes in common nests on bananas, palms and other higher Monocotyledonae. Some occur in a brown and a green form (Gollmar), others differ in colour according to their age. In repose they mostly rest at full length between or under the gigantic leaves of the food-plant, concealed by day. The head is rather flat, broadest beneath, and is kept closely appressed to the support, the mouth being directed forward. The head bears at the upper margin of the face some spines which when at rest are inclined posteriorly and a dense covering of hairs ("poodle-head"). Along the dorsum run longitudinal lines recalling those of the Satyrids; sometimes there are very fine, quite short hairs, often small tubercles and in *Caligo* simple, spinous points and isolated setae. The pupa thick, stout, short, angular, anteriorly convex, cremaster very thick, fastened firmly and broadly to the food-plant, so that the pupa can only be detached with difficulty. Only one moveable segment. In *Narope* the abdominal part of the pupa is compressed on the ventral surface and the dorsum bears some protuberances. The colour of the pupa is at first green, afterwards earth-grey or brownish. The pupa of *Brassolis*, which remains in the nests, is Bombycid in form and differs considerably from the other genera.

The scent-organs of the ♂♂ consist of pads or mealy spots on the underside of the forewing, hair-pencils in the folded hindmargin, bristles or hair-tufts at various places on the upperside of the hindwing, often larger pencils in the cell; the latter are sometimes imbedded in pockets formed of the wing-membrane and are eversible and expansible in a stellate form. Head and body robust, the latter as in the Hestias and Morphids small in comparison to the wings. Eye large, convex, naked or hairy; the three-jointed palpus in most cases extends beyond the head, is densely scaled and varies in the degree of hairiness. Beneath the palpus frequently bears dense, shaggy hair, the 2nd joint sometimes with hair-tufts. The "Basalfleck" of Reuter covering ½—⅔ of the basal joint on the inner side, oval, at the distal end rounded, the swelling in *Opsiphanes* recalling that of *Discophora*, occupying almost the entire basal spot, sometimes with larger, sometimes with smaller rounder scales; these are densely placed, parallel and erect. At the distal end of the Basalfleck there are often grooves which are covered by the cones and scales.

Like the Indian Amathusiids and the Neotropical Morphids the Brassolids are also very susceptible to climatic and local influences; they show a series of gradations on the Amazon from its lower to its upper course and nearly every Brazilian province has its own *Opsiphanes* race, a circumstance to which the author of these lines first called attention. Seasonal forms, however, have not yet been detected with certainty; this is connected with the time of appearance of the butterflies, which in general have a short period, beginning with the spring of the southern hemisphere and ending in the middle of the summer. We have only certain knowledge as regards southern Brazil, but it is probable that in the true tropics some species produce a succession of generations. If von Bönninghausen is correct the Brassolids split up into two unequal groups: namely those without a forked tail in the larva (only two genera, *Brassolis* and *Penetes*) and those with tailed larva (all the rest).

The originals of the figures, like those of the following family (the Morphids), are from the Fruhstorfer collection at Geneva (Florissant). Some descriptions have been taken from the well-known work ,,Das Tierreich" of the Academy of Sciences (Director, Prof. Seitz) by kind permission of Herr Stichel, who was the first to work out fully the family of the Brassolids.

I. Subfamily: **Brassolininae.**

Larva without tail-fork and without horns on the head.

1. Genus: **Brassolis** *F.*

This genus, from which the family is named, differs the most widely of any from the normal Brassolid habitus. This is seen chiefly in the compact, robust build, the thick body almost recalling the Heterocera, strong, broad head with quite short palpus, elongate, anteriorly truncate antennal club, such as otherwise occurs only in *Dynastor*, broad and hard thorax and very thick abdomen.

The few species which belong here are medium-sized, powerful butterflies with dark-coloured wings traversed by an orange band, the distal margin slightly concave in the ♂, convex in the ♀. The uncus according to Godman a simple hook, without lateral appendages: valve short, compact, at the distal, dorsal end slightly dentate. Egg spherical, with shallow, sometimes anastomosing longitudinal ribs of somewhat irregular course. Larva cylindrical, thickest in the middle, head without processes, beneath broad, strongly hairy. Anal points wanting, instead of them there are posteriorly 2 wart-like processes. They live gregariously, often in hundreds in large, bag-like nests on palms; the pupa is short and stout, without strong angles or protuberances, suspended by the cremaster.

B. sophorae, originally described from Guiana, from whence Linné obtained his name-type, splits up into four known local forms, which are distributed on the Atlantic side to Rio Grande do Sul, on the Pacific certainly as far as Peru. All agree in bearing a broad, obliquely placed, ochreous longitudinal band on the forewing and a submarginal band on the hindwing, in the ♂ continuous, in the ♀ more indistinct and broken up into separate patches. Under surface lighter, the ferruginous spot in the basal part of the cell more distinct; cell-band in the ♀ breaking up into spots. Hindwing without distal-marginal band, dotted and striated with whitish, in the ♂ with ferruginous spot in the basal part of the cell; forewing with a subapical ocellus, hindwing with a larger ocellus below the costa and another between the lower median veins. — Larva thickest in the middle, head large and without thorns or spines, short dorsal hairs arranged in tufts, without tail-points, but with small excrescences. On palms, in nests of thick silk placed at the base of the fronds or right at the end of the stem under the covering of the palm, concealed by day. Pupa smooth, brown, suspended. — *sophorae.* **sophorae** *L.* (62 a) differs considerably in the male from the ♀, which we figure, in the peculiar shape of the wing, especially in having the costal margin of the forewing even more concave than in *astyra* (62 a). Hindwing anally narrowed, produced into an obtuse point. Rather common everywhere and in the evening from about 5 o'clock buzzing round the banana thickets near human settlements after the manner of the Sphingids. — *lurida* In **lurida** *Stich.*, from Colombia, the ground-colour is duller, the band of the forewing lighter, in the ♂ posteriorly narrowed, and ending in a point at the hindmargin. Band of the hindwing nearer to the end of the cell, running out along the lower median vein. On the underside of the hindwing there is a third eye-spot between the upper and middle median veins. — *vulpeculus.* **vulpeculus** *Stich.* Body anteriorly and posteriorly fox-red. Wings paler than in typical *sophorae*, the band of the hindwing tinged with reddish at the costal margin and posteriorly, in the cell somewhat broader, then of uniform breadth to the inner margin. The cell also tinged with fox-colour in its basal part, so that the dark median spot stands out sharply; the median also faintly dusted with reddish. In the apical part 3 small white spots. On the hindwing the ochreous band before the distal margin is considerably broader than in typical *sophorae*. Paraguay, Argentina. According to 2 examples in coll. Fruhstorfer, the hitherto unknown ♀ has the cell of the forewing also basally somewhat more broadly and paler ochre-yellow, the band of the hindwing broader, but weaker. Underside of the forewing with the longitudinal band considerably reduced; hindwing more delicately irrorated and as is typical of Paraguay butterflies, pale earth-coloured, lighter than in examples from more northerly localities. — *ardens.* **ardens** *Stich.*, from Ecuador and southern Peru and probably also occurring in Bolivia, has the forewing in the ♂ 40—43, in the ♀ 49 mm in length. Band of the hindwing bright reddish ochreous, in the region of the hinder angle suffused with fiery red-brown.

B. astyra differs from *sophorae* in having the transverse band of the forewing anteriorly at the end of the cell broken into wedges, the part placed in the cell abbreviated or interrupted by the ground-colour. — Two geographical races: *astyra.* **astyra** *Godt.*, from central Brazil, distributed from Espiritu Santo to Santa Catharina. Hindwing near the distal margin without or with only quite faint traces of a band (name-type); occasionally (in examples from Santa Catharina), however, with a very distinct band (f. *dimidiata.* **dimidiata** *form. nov.*). Black-brown, forewing with ochreous yellow-brown oblique band, the costal part of which is forked and clouded or darkened. Whilst the distal arm nearly reaches the costa, the proximal is abbreviated or broken up into brown spots. Hindwing mostly unicolorous or with only faint traces of distal bands; ♀ with the ground-colour paler, the band of the forewing a little lighter. — Egg spherical with shallow longitudinal ribs, often running into one another; larvae in bag-shaped nests, a large number together, brown with light longitudinal lines. When they are somewhat grown one can hear the sound of their feeding and can track them by this means. The adult larva reaches 8 cm. in length, with reddish markings on the head; the pupa is smooth, slightly compressed ventrally, either dark brown with black, yellow-edged stripes or bright yellow with lighter stripes and patches. — *philocala.* **philocala** *Stich.* (62 a as *astyra*). Hindwing with distinct rust-red band near the distal margin. The hitherto undescribed ♀ (type in coll. Fruhstorfer [Geneva]) much larger than the ♂, round-winged like that of *sophorae*, but of greater wing-expanse. Cell-spot on the lower part before the apex reduced. Band of the forewing much narrowed anally. Hindwing occasionally with the rust-red submarginal band entirely absent. Habitat Rio Grande do Sul, where according to Mabilde the larva occurs from April to November on various palms and lives in an oval bag of 30—40 cm. in length and 10 cm. in breadth, which contains three or four inner divisions. In this the larvae remain for 7—8 months, packed one above another like sardines in a case, sometimes 5—600 specimens together. — *haenschi.* 1902 **haenschi** *Stich.* shows the band of the forewing bright rust-yellow and has no undulate distal marginal line beneath. Ecuador. — *maritima.* **maritima** *Stich.* has the band of the forewing paler and distally less broken than in *haenschi*; under surface with undulate, in places obsolescent line before the distal margin; the ocelli on the under surface are also less bright, more pale and blind. Venezuela.

isthmia. **B. isthmia** *Bates*, from Central America and Colombia, has the wings dark brown above, the forewing with a pale yellow-ochre oblique band, 9—10 mm. in breadth, with the proximal edge irregularly defined, somewhat dentate and bounded by the submedian. Beneath the oblique band is paler, only distinct beyond the cell, in the cell a rounded brown spot. Hindwing above brown, in the ♂ only a narrow ferruginous patch along the lower median vein, in the ♀ without markings.

granadensis. **B. granadensis** *Stich.* (62 a) closely approaches the preceding species, but is somewhat larger. Forewing with broad ochre-yellow oblique band, on the lower discocellular a black-brown spot. Hindwing with only quite indistinct traces of a reddish submarginal band, but with conspicuous dark grey mealy spot below the cell between the submedian and the first median vein. Beneath similar to *isthmia*, but the band of the forewing much broader and darker. ♀ differing from that of *isthmia* in the darker ground-colour and the more brilliantly coloured band of the forewing. Colombian specimens are somewhat larger than those from Ecuador. Colombia (Muzo ?); Balzapamba in Ecuador to the west of the Andes (750 m.).

ornamentalis. **B. ornamentalis** *Stich.* Forewing above with two angled yellow spots in the lower part of the cell, placed one above the other in the shape of a hammer. Beyond the cell a rather broad yellow transverse band, reaching the inner margin. Hindwing ochre-yellow as far as the distal margin, before the margin indications of a dark lunulate line. The colouring of the under surface shows through distinctly. Brazil (Pará ?).

2. Genus: **Penetes** *Westw.*

Closely approximates to *Brassolis* in the style of its colouring and also somewhat in the concave shape of the distal margin of the forewing, so that it is not improbable, as VON BÖNNINGHAUSEN suspected, that the larva approaches that of *Brassolis* and is not forked at the tail. The genus is chiefly characterized by the shape of the forewing, which in both sexes has the apex strongly produced and the distal margin deeply hollowed in the middle. In the forewing the cell is obliquely closed by the three discocellulars, which run in the same direction and nearly straight, the anterior only a little shorter than the middle and posterior, which are of equal length. Precostal cell of the hindwing rather large. Precostal vein simple, only at the extremity proximally curved; the cell likewise obliquely closed by the feebly curved lower discocellular. The genus is monotypical and is confined to Brazil.

pamphanis. **P. pamphanis** *Westw.* (67 b). ♂ above deep dark brown, with large, dull rust-brown spots, not sharply defined, in the disc of the forewing and more or less obscure rust-brown diffuse spots before the apex of both wings. Hindwing with darker veins, glossy grey at the hindmargin; a black-brown hair-pencil placed on the submedian in an extended, scaleless area of a shining, horny appearance. Type from Minas Geraes, in my collection from Espiritu Santo, São Paulo, Parana, Rio Grande do Sul, and a few examples which I myself captured in Sa. Catharina.

3. Genus: **Dynastor** *Westw.*

This genus is characterized even more than *Brassolis* by the robustness of the body, especially the thorax and abdomen, and the broad wings. From the nearly allied *Opsiphanes* it chiefly differs only in the short, appressed palpus, the short lower discocellular of the forewing, and in having the 3rd subcostal vein arise nearer to the 4th and the upper median vein further from the middle one. ♂ without distinct scent-organ; the eye-spots of the under surface reduced to dots or entirely absent. Both wings very broad, the forewing with strongly curved costa, the subcostal narrowly but distinctly separated from the costal, the distal margin somewhat ventricose, the inner margin nearly straight. Median and submedian slightly thickened at the base, but not strongly inflated as in the Satyrids. Hindwing with the distal margin uniformly rounded, the apex round and the costal margin fairly straight. Cell moderately broad, about half the length of the wing. — Valve basally thickened, in the middle narrowed, distally again widened, chitinized and sharply serrate. Penis relatively short. Saccus posteriorly arched. Uncus strikingly broad, recalling that of the Morphids, its lateral clasps shorter and more than twice as strong as in *Opsiphanes*, valve considerably narrowed posteriorly, distally with long, unequal points. — Of the 3 species belonging here the celebrated *D. napoleon* is unquestionably one of the most magnificent of all the butterflies. The range of distribution of the genus extends southwards to Paraguay, northwards to Mexico.

darius. **D. darius** is the most widely distributed species of the genus, occurring everywhere from Guatemala to Bolivia and from Trinidad through the whole of Venezuela and Brazil to Rio Grande do Sul, which is probably explained by the wide distribution of the food-plant. Two directions of variation may be recognized, of which the Andean and purely tropical branch shows large, nearly quadrate apical patches on the underside of the hindwing, whilst the Brazilian subform bears rounder, ocellated costal patches. The hitherto unobserved Paraguay form belongs, strange to say, to the tropical Andean branch, not to the Brazilian. — *stygianus.* **stygianus** *Btlr.*, originally described from Costa Rica, is recorded by GODMAN and SALVIN also from Guatemala, Nicaragua, Panama, Colombia, Ecuador and Bolivia, as well as from the Lower Amazon, and in coll. FRUHSTORFER there are 2 ♂♂ from Honduras, which WITTKUGEL discovered in San Pedro Sula. Probably the Trinidad race is also identical. I have no ♀♀ from the purely tropical districts; but according to the material in my collection the ♂♂ show all the differences which STICHEL described as follows in the „Tierreich“: “Larger, with sharper contrasts in colouring. ♂: half-band of the forewing more complete, purer yellowish white, at the upper radial more strikingly diverted from its course, its posterior part being pushed further towards the distal margin. Spot in the apex larger, mostly connected with a small band, the other 3 isolated spots placed beyond the half-band large, elongate, distally uncertainly defined. Zigzag band of the hindwing composed of larger pointed curves, anteriorly whitish, posteriorly grey-yellow with olivaceous tone; costal margin broadly whitish yellow; border at the distal margin narrow but distinctly defined, anteriorly coloured like the costal margin, from the middle onwards grey-yellow. Under surface of the forewing with small, sharply marked, elongate black costal spot immediately at the apex, the half-band very little noticeable, the three isolated spots more indefinite, the posterior one occasionally cleft longitudinally. Anterior eye-spot of the hindwing extraordinarily broad, flattened, rectangular with the short sides rounded. It occupies nearly or more than one third of the interneural space, anteriorly and posteriorly touches the costal and subcostal for its entire breadth, is at these long sides only distinguished from the ground-colour by the absence of the striation, but at the short sides shaded with dark brown; its central part is longitudinally somewhat darker and traversed by 2 lines of small white spots. Central eye-spot similarly developed, only somewhat shorter, behind it sometimes a white-centred ring-spot. Posterior eye-spot as in the typical subspecies, but mostly larger and more sharply marked. Distal margin of the hindwing strongly undulate." The ♂♂ from Surinam in my collection are not identical with *stygianus Btlr.* from Honduras, differing in the somewhat narrower whitish yellow band and the smaller patches on the forewing, also in the darker, deeper coloured under surface. But still less do they agree with the figure of **anaxarete** *Cr.* ♂ (anaxarete *Stoll* ♀), which has strikingly small spots on the forewing *anaxarete.* and relatively large triangular markings on the hindwing. In the ♀ which Stoll figures the oblique band of the forewing is even broken up into separate small spots hardly as large as lentils, and as Hübner also represents a ♂ similarly small-spotted it would seem that for some time only such peculiarly coloured, aberrant specimens were brought to Europe from some particular locality. — **mardonius** *subsp. nov.* (62 b) closely approaches *mardonius.* *anaxarete Cr.* in the narrower, almost uniformly broad band of the forewing, and also agrees with it in the shape of the nearly rectangular costal patch on the underside of the hindwing. On the other hand the zigzag band on the hindwing above is twice as broad and the under surface, in accordance with the general character of the Paraguay butterflies, is paler and without the purple dusting of *anaxarete*. Paraguay, from two ♀♀ in coll. Fruhstorfer. — **darius** *F.*, described from Brazil, is the commonest subspecies in collections; *darius.* both sexes bear a relatively large double patch of greenish white on the upperside of the hindwing, on which are placed regular series of undulated, greenish, pointed curves. ♀ sometimes enormously large. Espiritu Santo, Rio de Janeiro, distributed to Santa Catharina. — **icterica** *Stich.*, from Rio de Janeiro, is smaller than the *icterica.* type-form, the band and the three isolated spots on the forewing yellow instead of whitish. Zigzag band of the hindwing and a narrow marginal stripe at the distal margin anteriorly yellow, posteriorly dirty green-yellow. Larva yellow-brown, later grey-brown or green, longitudinally striped, with brown head, which in the adult larva bears short hairs at the margin. Along the dorsum a series of round dark spots, enclosing light dots anteriorly; small, bristle-bearing tubercles are scattered over the surface and the anal end terminates in a forked tail. On Bromeliaceae; full fed in 2 months. Pupa light green with brownish longitudinal stripes and dark shades and speckling; yields the butterfly in 12 days (W. Müller). — **faenius** *subsp. nov.* inhabits Rio Grande *faenius.* do Sul and is somewhat smaller than *darius* from Central Brazil, with somewhat smaller median spots on the upperside of the forewing, and the hindwing lacking the large yellowish white costal patches, in place of which there are greenish diffuse spots, which do not differ appreciably from the adjoining, irregularly shaped greenish pointed curves. The under surface agrees somewhat with that of *mardonius*; it shows the typical paler colouring of all the Rio Grande butterflies. ♀ dusted with almost pure white, particularly in the distal area. All the ocelli obsolescent, the median eye-spot in most examples entirely absent. Clasping-organs described in the generic diagnosis. From three ♂♂, two ♀♀ from Candelaria in coll. Fruhstorfer. According to Mabilde there are two generations. The larva is green with two figure-shaped marks on the head and appears in January and February, and again July and August, on Ananas and bananas. It changes into a green pupa in March — April, and August—September, and after 30 to 60 days produces the common and widely distributed butterfly.

D. macrosiris, in contrast to the preceding species, is extremely rare; only a few examples are known, mostly of only one sex. — **macrosiris** *Westw.* comes from Cayenne; it is black above with a slight violet- *macrosiris.* brown tinge, the distal border lighter, costal margin striated with black and white. The oblique band of the forewing, placed distally to the cell, is narrow, whitish, terminating at the first median vein, but continued as two small, isolated whitish spots. Distally to the oblique band two black, lighter-margined spots showing through from beneath, anteriorly with two small, crescentic or obtusely sagittate white spots placed near the apex. Hindwing with lighter distal border, towards the apex widened into a whitish spot. — Of **strix** *Bates* (62 b) only *strix.* ♀♀ are yet known. The name-type was from Guatemala, but it was afterwards found also at Cordoba, Mexico, by Höge. Our figure is from a Honduras specimen in the Fruhstorfer collection. Deep dark brown, costal margin of the forewing striated with white as far as a whitish oblique band placed beyond the cell, continuing which there is an elongate white spot. In the apical area 3 small white spots. Hindwing with whitish apex, otherwise uniformly dark. Under surface very characteristic, particularly in the irregular shape of the ocelli between the apex of the forewing and the oblique band. — **hannibal** *Oberth.* came from Colombia and differs in having *hannibal.* a more prominent white area on the forewing from *macrosiris Westw.*, the type of which Oberthür acquired *pharnaces.* with Boisduval's collection. — **pharnaces** *Stich.* is smaller than the preceding subspecies. The white oblique band on the upperside of the forewing somewhat broader, more sharply defined, although somewhat dusted at the proximal side, posteriorly terminating obtusely before the middle median vein and not running out towards the distal margin as in *macrosiris strix.* The single spot posterior to it much reduced. Hindwing with narrower white bordering. On the under surface the transverse striation throughout coarser, on the forewing red-brown; it disappears beyond the cell and in the distal area, in the submedian interspace there is only an indistinct shading. In the cell of the hindwing and beyond it the striation is widened into narrow stripes and in places reticulate, the ground-colour of the wing almost rust-red instead of yellowish. The elongate eye-spot in the costal area light red-brown, less sharply expressed, the other two ocellated spots in the radial and lower median cellules also only indistinct. Border at the distal margin narrowly greenish. Only 1 ♂ from Bolivia (Coroico, Yungas, at 2000 m.) known.

napoleon. **D. napoleon** *Westw.* (62 b) seems to be an archaic, nearly extinct species, exclusively confined to the state of Rio de Janeiro, and even there only recorded from Petropolis; from time to time the splendid butterfly has been successfully bred from the larva. The larva, although known for over 30 years, has not yet been described. According to von Bönninghausen it lives on one of the Bromeliaceae, with non-dentate leaves. ♀ considerably larger than the ♂, which we figure, the underside of the hindwing with somewhat lighter orange marginal area, as in *darius F.* Forewing, however, with black median area, hindwing throughout ochre-yellow, dusted with lighter near the base. The black veins stand out very sharply against the ground-colour.

II. Subfamily: Caligoninae.

Larva with forked tail and with horns on the head.

4. Genus: Dasyophthalma *Westw.*

A small but interesting genus, which in general aspect and also in its habits recalls the Indian *Thaumantis,* particularly *lucipor* and *odana.* Only one species (*creusa*) has the colouring darker. In the densely haired eyes *Dasyophthalma* differs from all the other Brassolids. Structurally it approaches the genus *Caligo,* but the precostal cell is strikingly broader, especially considering the smaller size of the body. Head and body more slender than in the preceding genus. Antenna less than half the length of the wings. Forewing triangular with the inner angle rounded, hindwing in the ♂ with the apex pronounced and the distal margin undulate. Wings above black or quite dark brown, sometimes with a bright blue reflection, the under surface with pupilled ocelli. The ♂ bears on the upperside of the hindwing a scent-spot at the posterior margin of the cell. Like its Indian relative, *Thaumantis,* the species of *Dasyophthalma* exclusively inhabit dense forests, where they always keep near the ground, only leaving the damp cover when baited with hung up bananas. One species (*rusina*) I have never seen flying at all; all my examples I owe exclusively to this bait, which they visit together with *Eryphanis reevesi, Prepona* species and occasionally a *Morpho catenarius.* Probably they have all only one brood. According to my recollection they appear in Santa Catharina in February, only worn examples are still to be taken by the end of March and at the beginning of April they disappear completely. Concerning the early stages nothing further is known than that the larva lives on bamboo. Distribution: central and southern Brazil.

creusa. **D. creusa** splits up into two local races: **creusa** *Hbn.* (62 c), only known as yet from Santa Catharina and Rio Grande do Sul, appears to be very local, but to occur in abundance in suitable localities. My collector, Julius Michaelis, and I myself captured nearly 1000 examples in the course of 2 years at Theresopolis and in the valley of the Capivary River. At Blumenau it seems only to occur sparingly and in Rio Grande, at the extreme limit of its range, it is one of the greatest rarities. I possess no ♀♀ from Rio Grande. The upper surface is black, the forewing traversed from the apex to the middle of the inner margin by a bone-yellow gradually widening oblique band. The ♀, of which we figure the under surface, is considerably larger than the ♂, with broader bands, beneath paler grey-green. Upper surface: hindwing only with two or three yellowish splashes in the middle of the costal margin. The median band of the forewing more vertical, broader than in the ♂, less pure yellow, more greenish, connected with the costal border by a transcellular row of indistinct spots. Before the apex of the cell on the hindwing somewhat dusted with greenish. ♂ with long yellowish hair-tuft at the basal part of the cell of the hindwing. Flies February to April. *creusa* is par excellence a visitor to sweets and comes at any hour of the day to hung-up bananas; frequently it is even tempted at night by the sweet, rotting fruit and I found it repeatedly as a not particularly welcome addition in the

baronesa. killing bottles in which I was taking the baited Heterocera. — **baronesa** *Stich.* is a not sharply differentiated local form discovered by my collector J. Michaelis in Espiritu Santo, and apparently also occuring in Rio de Janeiro, where according to von Bönninghausen it is not very rare at Petropolis. ♂ distinguishable from *creusa* by the more complete yellowish median band on the upperside of both wings. ♀ scarcely differing above, beneath with smaller and more regular oval median ocelli.

D. rusina may be divided into two local races. The species is everywhere rare and is distinguished by the brilliant, intensive deep blue reflections on the basal part of the forewing and the median area of the hindwing. *rusina.* **rusina** *Godt.* (= delanira *Hew.* ♀) is only certainly known as yet from Santa Catharina. ♂ with black hair-pencil near the base of the hindwing. The light band on the forewing runs parallel with the distal margin and is continued in the same direction across the hindwing. — *principesa.* **principesa** *Stich.*, discovered by Michaelis in Espiritu Santo, seems to occur also in Rio de Janeiro, where it was observed on the Corcovado and at Petropolis by von Bönninghausen, who further states that the larva lives on bamboo. Quite resembles the typical *rusina*, except that the light band on the wings is somewhat less broad, on the forewing sometimes widened in the middle, and the blue reflection on the hindwing more extended. Under surface in both sexes lighter throughout than in *rusina*, the almost white median band without darker orange-coloured bordering, the distal area not grey-brown as in *rusina*, but distinctly divided into two parts, the submarginal part reddish brown, the distal predominantly striated with whitish grey.

vertebralis. **D. vertebralis** *Btlr.* (62 a) is a sharply differentiated species, and was captured together with *creusa* in Espiritu Santo by J. Michaelis, so that the locality "Para", erroneously given by its author, has been corrected. Under surface as in *creusa* with three large red-brown, black-ringed median ocelli, placed in a light yellowish patch. Band of the forewing narrow, oblique, composed of spots. Under surface of the hindwing with 3 ocelli: the 1st in the middle of the costa, the 2nd distally to the cell, the 3rd in the posterior median cellule. ♀ larger, with broader wings and duller colouring, so that the striae of the under surface show through. The band of the forewing runs more steeply.

5. Genus: **Opsiphanes** *Westw.*

Differs from *Caligo* in the more pointed and not so excessively large wings, the larger precostal cell and the relatively stronger body, from *Brassolis* in the longer palpi. Head large, with strongly rounded eyes, frons short, palpus on the underside densely clothed with bristly hairs, upcurved in front of the face, extending but little beyond the head. Antenna gradually thickened, nearly half the length of the costa. Thorax very broad and strong. Forewing mostly rather pointed, the distal margin usually somewhat concave; inner margin straight. Subcostal five-branched, branches 1 and 2 arising before, branch 3 considerably behind the end of the cell, the fourth running into the apex, short-stalked with the fifth. Cell of the forewing short and broad. Hindwing almost round, only a little elliptical, with the apex rounded. The scent-organs of the ♂♂ are hair-pencils on the upperside of the hindwing, which can be spread out in a stellate form. Abdomen powerful, in the ♂ with lateral protuberances. Clasping-organs Satyrid-like, extremely simple. Uncus slightly curved, with 2 lateral clasps, harpe similar to that of the European *Karanasa* (= *Satyrus* of the *huebneri* group, vol. I, p. 127), proximally somewhat widened, in the middle narrowed, distally with projecting ventral point. Egg according to W. Müller spherical, finely ribbed. The larva appears after 10 days, and when young is brown, striped with yellow or red, with black head. When full-grown the head shows a crest of posteriorly directed horns and the face is striped with red-brown. Body thickened in the middle, with 12 longitudinal lines, terminating posteriorly in a forked tail. The larvae live on bananas and rest on the underside of the gigantic leaves, along their midrib. Pupa less compressed than those of the preceding genera, green-yellow, the wing-cases with brown margins and stripes and with a silvery spot. According to Dr. Hahnel some species emit a scent of vanilla. They remain all day among the lower branches and round the trunks and are fond of congregating on fallen fruit. Some species can be baited with bananas. The species of the *batea* group prefer the light undergrowth, where they are found in the so-called "Waldschänken", i. e. on tree-trunks which exude sweet or fermenting sap. Dr. Hahnel also met with them even at early dawn near human habitations on refuse, about which they flew restlessly.

Copulatory organs, judging from those of *O. invirae remoliatus Fruhst.*, remarkably Satyrid-like, scarcely differing from those of the Palearctic *Eumenis.* Uncus hook-shaped, slightly bent downwards, two lateral clasps extremely delicate; valve quite regularly of the simplest structure, basally somewhat thickened, but not so markedly as in the genus *Dynastor*, slightly incised in the middle, the ventral distal end projecting as in *Eumenis cordula*, the dorsal somewhat retracted, slightly chitinized, with two excrescences of unequal size. The whole ventral part of the valve long-haired. Penis very broad, saccus quite normal, rather long, its proximal end not appreciably widened.

Four groups, of which *Opoptera* is so nearly entitled to generic rank that it is only here treated as a subgenus because its author so regarded it and in order to avoid splitting up a very natural genus. *Catoblepia* on the other hand is only maintained on account of the secondary sexual characters, as there are no constant structural differences at all.

Precostal cell of the hindwing longer than broad, **Opoptera.**
Precostal of the hindwing higher than broad, **Opsiphanes.**
Cell of the hindwing narrow, middle and lower discocellulars nearly straight, **Catoblepia.**
Cell of the hindwing narrow, middle and lower discocellulars quite weakly curved, **Selenophanes.**

Group **Opoptera** *Aur.*

The species of this interesting little group strongly recall Satyrids in their thin, delicate wings. The genus, or rather subgenus, as which its author introduced it, was formerly united with *Opsiphanes*, but is rightly separated on account of the broader precostal cell of the hindwing. Otherwise *Opoptera* differs from typical *Opsiphanes* also in having the cell of the forewing strikingly broad and that of the hindwing short, relatively narrow distally. The precostal cell of the latter is longer than broad. Head moderately small, with strongly rounded, naked eyes and hairy frons. Tongue strong. Palpus beneath with bristly hairs, extending little beyond the head. Antenna considerably longer than in the preceding, in the ♂ often more than half the length of the costa, little thickened at the end. Thorax not so robust as in *Opsiphanes*, the whole build sometimes strongly Satyrid; forewing with rounded apex and large, broad cell, reaching to the middle of the wing. Costal and subcostal separate throughout their whole course, the latter 5-branched, branches 1 and 2 arising before, 3 behind the end of the cell, 4 and 5 short-stalked. Hindwing ellipsoid, with slightly undulate distal margin, lower median vein with a scent-pouch. Abdomen slender and rather long.

Concerning the early stages nothing is known. The imagines with one exception (*bassus*) are true forest butterflies, which flutter about with a weak flight near the ground, lead a shy and sluggish existence in the bamboo thickets and by preference keep near the water-courses. Some of them are certain to be met with where fermenting sap exudes from holes bored by insects in the trees of lower growth. At such places they sometimes sit for hours with the wings closed and it is in this way that they are most easily caught. They are very local and three out of the six known species inhabit southern Brazil.

Sect. I.

Apex of the forewing angled or rounded, hindwing of the ♂ with a hair-pencil in the cell or a brush-shaped hair-tuft at the submedian.

O. aorsa recalls Indian *Lethe* and *Zophoëssa* in the tailed hindwing and the upper surface is distinguished by very narrow bands and by a purple gloss which covers these bands in their marginal part. Previously only known from Brazil, *aorsa* was recently discovered also at the sources of the upper Amazons, so that there are
aorsa. now four local races to record: **aorsa** *Godt.* (63 a), the type of which probably came from Rio de Janeiro, extends southwards to Rio Grande do Sul. It is everywhere rare, and I cannot remember to have found it on the banana-bait which was so commonly visited by *Dasyophthalma*, *Caligo*, *Eryphanis reevesi* and other species of *Opsiphanes*. It is a species of the larger forests, never leaving the shade of their tall trees. Moreover its period is very short (February and March) and in the course of a year one probably meets with scarcely more than half a dozen examples, and even those are mostly damaged on account of their delicate wings. Forewing in the ♂ with pale ochre-yellow oblique band, beginning beyond the middle of the inner margin and, sometimes slightly interrupted, running to the anal angle. In the apex small white spots. Hindwing with distinct marginal markings. Of the narrow bands crossing the cell of the forewing the proximal is as a rule dull whitish or brown, interrupted in the middle, the distal complete, of silver-white colour, reaching to the middle part of the median.
litura. In ab. **litura** *Fruhst.*, from Espiritu Santo, the marginal markings on the upperside of the hindwing have be-
fuscata. come brown-violet. — **fuscata** *Stich.* is the same shape as the typical subspecies but considerably smaller, hindwing with more rudimentary tails. ♂; above black-brown, the bands near the apex and distal margin of the forewing strongly shaded with brown, particularly in the posterior part quite blurred. Hindwing only showing quite indistinct light spots at the margin. Beneath the light angled band in the distal area has almost entirely disappeared, only a small yellowish white spot at the costal margin and another in the anterior angle of the lower median cellule persisting, together with a few whitish splashes in place of the anterior part of this band. Submarginal line at the distal margin, and correspondingly also the boundary of the dark part of the wing adjoining the distal area, strikingly dentate. Hindwing considerably darker than in typical *aorsa*, particularly in the basal and hindmarginal areas, the ground-colour there strongly tinged with violet. At the border of the distal margin a row of light, shallow lunular spots on the dark brown undulate line stands out conspicuously against the darker marginal dusting. In the ♀ the upper surface is vaguely rust-red, forewing with narrow light ochre-yellow band, similar to that of the typical subspecies, in which, however, the branch running anteriorly (towards the apex) from the top of the obtuse bend in the distal margin is lacking. Distal markings of the hindwing weak, faint, in the anal angle entirely disappearing. From the Upper Amazon (Manaos).
hilara. — In **hilara** *Stich.*, from Ecuador and Peru, the ground-colour is darker, above deep black-brown, the band of the forewing deep yellow, in the anal part notched proximally at the veins. Hindwing above unicolorous dark with white fringes, not distinctly spotted before the distal margin. Beneath the transverse band in the cell of the forewing is broken up into spots. Forewing and basal area of the hindwing striated with milk-white.

arsippe. **O. arsippe** has 2 geographical subspecies. **arsippe** *Hopff.* Oblique band of the forewing ochreous, almost as in *aorsa*, but darker, posteriorly strongly angled, otherwise smooth, distally somewhat broken. Of the anterior three small white spots in the apical area the middle one is placed somewhat distally; a fourth appears as a small crescent or curved streak at the distal boundary of the eye-spot, which shows through from beneath. In the ♀ the distal border of the hindwing is of a somewhat lighter tone than in the ♂. Near the costal margin in the apical area there is in addition an isolated ochre-yellow spot; the tail-like point at the lower median vein darker brown. Length of the forewing ♂ 40—41, ♀ 42 mm. Under surface less variegated than in *aorsa*. Southern Peru. Very rare, only received from Chanchamayo. — *bracteolata.* **bracteolata** *Stich.* Darker than the preceding. White apical spots of the forewing very small, oblique band distally to the cell broken up into three small, isolated spots. Subapical spots at the distal margin very small, tail-like appendages of the hindwing shorter. Middle band in the cell of the forewing beneath continous. The two small silky white spots between the medians lie like silver spangles on the dark ground. Before the distal margin of the forewing a lighter, whitish, narrow stripe, following the former. 1 ♂, from Bolivia.

syme. **O. syme** replaces *sulcius* in Central Brazil and seems to be a rather rare species, of limited geographical distribution. Two local forms: **syme** *Hbn.*, with the name-type from the state of Rio de Janeiro, where it is regularly found at Corcovado and in the Organ Mountains near Petropolis. Similar to the preceding species, but the yellow oblique band of the forewing much reduced and partially broken up into small spots; on the hindwing the row of yellow submarginal spots likewise smaller. In the cell of the forewing the markings of the under surface show through above. Of the eye-spots on the underside of the hindwing the first, placed in the middle below the costa, has a brown ground, which gives it a somewhat blind appearance, while the one placed between the median veins is more brightly coloured. The ♀ has before the distal margin of the hindwing somewhat more distinct yellow spotting and on the black colour of the disc a blue reflection. — *fumosa.* **fumosa** *Stich.* (65 b, as *syme*) has the ground-colour somewhat darker than examples from Rio de Janeiro, the hindwing in particular is suffused with blackish and the submarginal row of yellow lunules nearly obsolete, merely indicated by a lighter tone of colour or only persisting in the anterior part. Espiritu Santo, first found by my collector, Julius Michaelis, rather rare.

sulcius. **O. sulcius** *Stgr.* (63 a) comes from South Brazil, where it represents the Central Brazilian *syme*. It resembles the latter, but differs in the bright ochre-yellow band of the forewing, which is there narrow and dentate and terminates before the anal angle; in *sulcius* on the contrary it is broad and reaches the anal angle. — *sodalis.* The form **sodalis** *Röb.*, from São Paulo, is strongly suffused with yellowish above and beneath, especially in the proximal area of the wings, and the marginal markings on the hindwing more extended.

Sect. II.

Forewing with the apex more pointed. ♂ without true hair-pencil. The lower median of the hindwing arises not far from the base and forms close behind the cell a deep pouch filled with mealy scales.

staudingeri. **O. staudingeri** *Godm. & Salv.* (63 b). Size of the preceding; upper surface bright dark brown, even the usually deep black apex brown. Before it a yellow-red oblique band, partially darkened with brownish, beginning before the last third of the costal margin, running obliquely towards the middle of the distal margin, then bent and running parallel with the distal margin towards the inner margin, terminating in almost a point at the submedian. Beneath the hindwing has a faint ring-shaped mark in the middle of the cell. The anterior ocellus, in the middle of the costa, is the larger, with brown ground, the one between the medians the smaller, with blackish ground and brighter markings. Panama; very rare, only a few examples known; the ♂ figured, from coll. Fruhstorfer, came from Costa Rica. A ♀ from coll. Staudinger, from Chiriqui, was first described by Stichel as follows: "Somewhat larger than the ♂, ground-colour of the upper surface lighter, light reddish brown. Band of the forewing broader, less sharply angled, running posteriorly in a slight curve. Border at the distal margin of the forewing ochre-yellow. Under surface as in the ♂. Length of the forewing 46 mm."

Group **Opsiphanes** *Westw.*

O. batea is one of the most interesting species of the genus; its range indeed is only a comparatively restricted one, being confined to subtropical Brazil and the adjacent countries, but it offers little resistance to climatic influences even at short distances, and the result is a series of geographical races concerning which a great deal has already been published, without, however, elucidating them satisfactorily. The centre of distribution for the collective species seems to be the province of Santa Catharina, from which we already know two representative species, probably on account of the more thorough exploration of this district. All that is certain is that *batea* occurs from Espiritu Santo to Rio Grande do Sul, changing gradually from north to south and becoming progressively more melanotic in colouring southwards. Together with quite dark forms, however, there occur in both the southern provinces of Brazil also retrogressions to the lighter name-type. We can hardly regard them as seasonal forms, as according to my experience the species of the *batea* group have only one generation, which occurs in the spring and disappears in April and May, when the cool nights begin. The clasping-organs have not yet been investigated, but according to Stichel these lead to no result in this genus, as the organs themselves are not yet sufficiently differentiated. The early stages are not known, and thus the separation or union of the several forms still remains more a matter of instinct or personal choice than of experimental knowledge. If here again I deviate from the previously frequented path, it is on the ground of a delightful accumulation of material, which I have been fortunate enough to get together. — *batea.* **batea** *Hbn.* (62c), the name-type, probably came from the state of Rio de Janeiro; at any rate HÜBNER's figure, which is not so good as most in his works, shows the principal distinguishing mark of the Rio specimens, the almost vertical black distal border of the forewing, which is not expanded proximally (towards the cell) and has its inner edge almost straight. All the other forms, on the contrary, have an apical spot extending as far proximad as in our figure (61a 2, *subsericea*) or even further and similar or still finer and more numerous proximal incisions. Moreover all the representative forms bear a more or less distinct black spot at the apex of the cell of the forewing, which apparently is only absent in *batea* from Rio de Janeiro. Upper surface of the hindwing with less of the dull red-brown gloss. Under surface with parts of the cell of the forewing whitish and with longer, almost whitish yellow median band, posteriorly tapering to a point. — *aspherus.* **aspherus** *subsp. nov.* is a larger race from Espiritu Santo, the most northerly locality known, in which the forewing has the three whitish yellow subapical patches already somewhat faint and the distal border more deeply indented. ♂ almost, ♀ entirely without black spot at the apex of the cell. Marginal area of the hindwing in the ♀ extending to the cell, without any trace of red-brown. The whitish parts of the under surface more extended than in *batea Hbn.* Very rare, while according to VON BÖNNIGHAUSEN *batea* is very common in the Organ Mountains near Petropolis. — *glaukias.* **glaukias** *subsp. nov.* is a local form from the province of São Paulo, very nearly allied to the name-type; smaller than *aspherus* and *praegrandis* (61a), but appreciably larger than *batea.* Subapical patches darker than in the preceding races, ochre-yellow. Basal area of both wings of a deeper colour, more inclining to red-brown. Distal border proximally rather regularly but not very deeply incised. Cell-spot of the forewing rudimentary. Under surface hardly differing from *batea* in the shape of the ocelli and the general coloration. From three ♂♂ in coll. FRUHSTORFER. ♀ unknown. — *dubia.* **dubia** *Röb.* likewise came from São Paulo and according to STICHEL is a very small, somewhat abnormal form, with paler ground-colour and strikingly lighter distal margin. — *panormus.* **panormus** *Röb.* is apparently not rare at Blumenau and even somewhat further south, at Theresopolis in Santa Catharina, I myself took numerous examples in the "Waldschänken" already mentioned, which I searched twice daily. According to the material in my collection *panormus* chiefly differs from *batea* in the black distal border of the forewing extending to the apex of the cell and leaving either no yellow-brown spot at all or only a very reduced, narrow one which never reaches the costal margin, whilst in *batea* and its offshoots it always runs from the first median to the costal as a distinct, sharply defined transcellular band. On the under surface the striation is predominantly black instead of red-brown. RÖBER's type, which is in my collection, differs from all the examples of *batea* to which I have access in having a beautiful yellow submarginal punctiform spot on the underside of the forewing between the middle and lower medians. — *beata.* **beata** *Fruhst.* (61a as *subsericea*) still possesses quite distinctly the *batea*-character and differs from *panormus* chiefly in possessing a broad yellow band-like transcellular spot, distally dusted with reddish, on the forewing, which is particularly well developed in the ♀. The black distal border of the hindwing somewhat narrower than in *panormus.* Santa Catharina, Theresopolis, up to about 1500′. Appears about January and flies until March, preferring the edge of the woods or the so-called Capoeira, the spare, dwarfed growth which springs up where the forests have been cut down. The butterflies are fond of the sweet sap of certain shrubs which exudes from holes bored by small beetles and besides Lepidoptera also attracts enormous numbers of *Meliponae, Lucanidae, Elateridae* and sometimes also *Gymnetis* (*Cetonidae*). — *didymaon.* **didymaon** *Fldr.*, the locality of which was incorrectly given by STICHEL as Sta. Catharina, almost certainly came from Rio Grande do Sul, judging by the type before me from the Tring Museum, which I have been able to compare with sufficient material from my collection. The subapical patches of the forewing about as in *batea*, small, duller yellow than in *panormus* and *beata*, but apparently very variable, in the ♀ again very large, nearly white. The black marginal area of the forewing much widened, bearing either no yellowish transcellular band or only an indistinct one, which in the ♀ is also darker and more reddish. Distal border of the forewing sometimes narrow (type) or again nearly reaching the cell. Hindwing above with rust-red tinge proximally to the black marginal area. Under surface contrary to the general character of the Rio Grande fauna predominantly blackened, the transcellular band of the forewing a mere thread, ocelli of the hindwing with delicate, scarcely appreciable yellow bordering, on the other hand the nearly black outer border much widened. São João da Reserva, Rio Grande do Sul, 3 ♂♂, 1 ♀ in coll. FRUHSTORFER. Appears at the end of the summer and prefers the edges of the woods or light thickets (MABILDE). — *subsericea.* **subsericea** *Fruhst.*, analogous to *beata Fruhst.*, is the light form from Rio Grande do Sul and differs from *didymaon* in having a broad yellow transcellular zone on the forewing. Smaller than the other *batea* forms, wings more rounded, and in the ♀ scarcely undulate. Black distal border of both wings strikingly narrow, proximally inappreciably undulate, but especially on the hindwing broadly tinged with dark rust-red, as in *didymaon Fruhst.* Hindwing with slight silky gloss. Apex of the cell on the forewing in the ♂ only quite faintly red-brown, in the ♀ spotted with black. Under surface: darker than in *beata*, hindwing only with a short light band, which does not extend beyond the cell, otherwise uniformly striated with red-brown throughout. Ocelli oblong, relatively small. *subsericea* agrees with the type in the very small dull yellow subapical patches of the forewing, but differs beneath in the darker general colouring and in having the yellow band at the apex of the cell of the forewing broad instead of filiform. — **praegrandis** *Fruhst.* (61 a) on the *praegrandis.* whole approaches *aspherus*, but is even larger. Above with the black distal border deeply incised proximally, but scarcely extending nearer to the cell than in *beata*. Apical spots of the forewing very large, light yellow. *praegrandis* differs further from its Brazilian allies in the following points: distal border of both wings proximally more deeply excised, much lighter towards the costa. Abdomen above lighter brown. Beneath: distal part of the forewing broader and lighter yellow-grey with larger black ocelli. The triangular subapical spot striated with white and more extended, the transverse bands of the cell light brown. Hindwing: the apical ocelli more elongate, the anal ones with broader light brown bordering. The yellowish discal band light yellow, more extended, broader than even in *beata beata* and running as far as the anal ocellus. The brown submarginal band of the forewing much narrowed towards the apex, anal ocelli of the hindwing with fuller light blue iris, filling almost half the ocellus instead of the small "lunula" of *batea*. Locality: Paraguay. *praegrandis* passed for a long time in collections under the name "*didymaon Fldr.*" But Felder adds to his diagnosis: "Our examples are all smaller than *batea Hbn.*, among which they seem to occur", which contradicts this determination, and at the same time shows that forms analogous to *beata* were already known to Felder, which he was observant enough to separate from his *didymaon*.

O. catharinae *Stich.* (= wilhelminae *Röb.*) exclusively inhabits Santa Catharina and is undoubtedly *catharinae.* far the rarest of the two or three species of the *batea* group. Its specific right is beyond all question; the principal distinguishing characters consist in the absence of the hair-pencil in the cell of the hindwing, the more rounded shape of the wings and in the basal area on the upperside of both wings being by far the lightest, nearly yellow, only reddish at the edges, and the veins red or black to the middle of the wings. Distal border of the hindwing very broadly grey-yellow. Transcellular spot and apical bordering of the forewing similar to that of *beata Fruhst.* (61 a). Apical patches of the forewing alike in both sexes, very light, almost pure white. Ground-colour of the ♂ ochre-yellow, both wings with broad black margins, bordered with lighter grey-black; the yellow colour shaded with rust-red where it touches the black distal part. The proximal boundary of the latter begins not far beyond the cell at the costa, runs parallel with the end of the cell to the upper median, then projects basewards again between the upper and middle medians, and beyond the latter once more recedes considerably towards the distal margin. The whole boundary-line is dentate but not sharply. Discocellular proximally brownish, distally blackish. In the black distal part a row of 5 whitish spots, running in a curve from the costa, the last is a mere dot. The row of spots terminates between the lower radial and the upper median, the spot being here replaced by the apical eye-spot, which shows through from beneath. Black distal part of the hindwing of the same extent as in *O. didymaon Fldr.* Proximal boundary uncertain, not far from the end of the cell running parallel with the distal margin. At the inner margin a bare friction-patch with a small hair-pencil at the submedian. Under surface nearly as in *O. didymaon*, on the whole with a somewhat lighter tone, a brownish, dark-edged band at the discocellular broader than in that species, the dark-shaded stripe placed proximally to the two marginal lines, corresponding to the black distal part of the upper surface, bent somewhat towards the distal margin behind the lower median. Type probably from Blumenau, from whence also came the examples described by Röber, which I have before me for comparison. I myself took *catharinae* at Theresopolis in company with *O. batea beata Fruhst.* and *O. didymaon Fldr.* at the same exudations of sweet or fermenting sap in the underwood of the river-valleys, but much more sparingly than the other two forms.

O. bassus commonly occurs in company with *O. batea Hbn.* and *didymaon Fldr.*, but in contrast to these it ventures even in the greatest heat of the day on to sunny grass-lands with scattered bushes, and once when chasing it I trod on a poisonous snake 2 m. in length, crawling in the grass, which perhaps was also hunting the butterflies. Two local forms: **bassus** *Fldr.*, described by its author without more exact locality as from *bassus.* "Brasilia meridionalis"; type probably from Blumenau in Santa Catharina; differs above only in the narrower transcellular band of the forewing and beneath in the considerably smaller ocelli from **luteipennis** *Btlr.* (61 a), *luteipennis.* which according to a ♂ before me from Rio Grande do Sul is still more stongly tinged with red-brown above than the *bassus* ♂♂ taken by me. The nomenclature is somewhat arbitrary, as Butler described his *luteipennis* without any locality. I have only applied the name to the Rio Grande form to prevent its sinking as a synonym and to avoid creating a new one. ab. **oculata** *Stich.* designates a poorly coloured aberration *oculata.* which happens to have the anal ocellus of the hindwing marked above also.

O. boisduvalii *Westw.* (62 d) is a species of restricted range, noteworthy for its light yellow colouring *boisduvalii.* and known to appear in the twilight and to have a swift and powerful flight. Originally described from Mexico, it extends southwards only to Guatemala and Honduras. Under surface with the same tone of colour as the figured upper surface, a costal stripe darkened, with whitish transverse striation, the rest of the wings irrorated and watered with brownish or rust-red almost throughout. Hindwing with two ocelli; the anterior one oval, distally somewhat flattened, finely margined with black, interiorly tinged with rust-brown and ornamented with a white curved streak. Posterior eye-spot round, the pupil yellowish with a small white curved streak, the border blackish-dusted, the whole margined with ochreous and finely surrounded with rust-brown. Between the two, arranged in a crescent, three round light spots or patches are noticeable in the striated surface, the posterior two sometimes white-pupilled. In the distal marginal area two rather distinct rust-brown undulate bands are formed by the closer striation and shading. The distal margin itself is somewhat duller, especially anteriorly. Abdomen with lateral friction-pads. The ♀ larger, broader-winged, with a band-like light patch behind the cell. Distal margin of the forewing nearly straight.

O. cassiae inhabits tropical South America from Colombia to Bolivia and from Guiana to Rio de Janeiro and Santa Catharina. Common wherever its food-plant, the edible banana, has been planted, on the leaves of which the light green larva lives. The species probably flies all the year round, and examples are known from Surinam which perhaps belong to a dry-season form. The separated branch-races are not very sharply divided; in the Central Brazilian races it cannot be proved with certainty whether they are due to geographical *cassiae.* or only climatic influences. — **cassiae** *L.* came from Surinam, but is apparently distributed as far as eastern Colombia. Forewing with a yellowish band, much more narrowed anally than in *lucullus* (61 a); hindwing with a short yellowish marginal band from the apex to about the upper median, thence onwards narrowed and mostly only continued as reddish shadows. Underside of the hindwing with a very large, nearly retort-shaped apical eye-spot, sometimes distally produced, and a small, rounded, yellow-ringed anal ocellus. Between the *cassiculus.* two occasionally some blind accessory eye-spots. **cassiculus** *Stich.* is a smaller form, perhaps belonging to the dry season. The ♂ has the band of the forewing somewhat narrowed, sharply cut posteriorly by the median veins and showing a tendency here to break up into spots, and with both its proximal and its distal edge deeply incised. Hindwing unicolorous dark brown, at most in the apex one or two quite blurred, scarcely perceptible small, narrow, diffuse spots. ♀ somewhat larger, band of the forewing but little outcurved proximally on the cell, posteriorly strongly notched at the median veins, the veins themselves there somewhat dusted with brown. Hindwing only with some small pale ochre-yellow apical spots or the short beginning of a dentate *pseudocassiae.* marginal band. — **pseudocassiae** *Fruhst.* ♂: length of the forewing 42 mm. This interesting, small race forms a transition from *cassiae* to *tamarindi*, as it bears on the forewing a compact, dark ochreous band as broad as in *cassiae decentius Fruhst.* and has the hindwing unicolorous, entirely without markings, like *tamarindi*. On the under surface *pseudocassiae* is about intermediate between *tamarindi* and *xiphos* in marking and colouring. *pudicus.* Manaos. — **pudicus** *Fruhst.* inhabits Bahia. Transverse band of the forewing light yellowish, of about uniform breadth from the costa to the anal angle and considerably broader than in *cassiae L.* Hindwing with a short, narrow, light yellow admarginal band, terminating at the upper median. ♀ with scarcely appreciable red-brown tinge on the hindwing. Under surface: pale grey, the yellowish oblique band of almost uniform colour across the entire forewing. Ocelli of the hindwing, including the anal, very large. This subspecies, which manifests distinctly the dry-season characters, has probably sprung from what was originally a dry-season form, similarly to the East Javan forms which have already attained to fixity as subspecies. It is fairly certain that in the other northern provinces of Brazil, some of them with still more sterile conditions and even *decentius.* longer rainless periods than prevail in Bahia, still more specialized *cassiae* races occur. — **decentius** *Fruhst.* forms the transition from *pudicus* to the Central and South Brazilian local form *lucullus*. Bands as in *pudicus*, but dark orange-coloured. Under surface: ochreous band of the forewing short, broad, extending from the anal angle only to the middle median, at the lower median deeply notched by the black basal colouring. *lucullus.* Minas Geraes. – **lucullus** *Fruhst.* (61 a) differs from all the northern races in having the under surface considerably darkened, with all the whitish and yellowish parts standing out more distinctly, especially on the hindwing. The striation is almost deep black and the purple tinge is increased in extent and intensity. ♂: band of the forewing dark ochreous, costally very broad, proximally very irregular, i. e. deeply incised, anally narrowing as in Hübner's fig. I, pl. 74. Admarginal band of the hindwing in contrast to *pudicus* and *decentius* little developed, only consisting of 2 or 3 diffuse patches. ♀: transverse band of the forewing much enlarged, broader and paler than in typical *cassiae*, proximally irregular. Admarginal band of the ♀ very broad and long, always distinct and remaining light yellow as far as the middle median. Anal area tinged with red-brown. Under surface; ♂ with the yellowish anal band of the forewing quite narrow, obsolete. ♀: band very broad, light yellow to the second median, then somewhat covered with reddish scales, running to the costal margin and becoming gradually paler. Ocelli of the hindwing very large. The butterfly is common at Rio among banana, on the leaves of which the light green larva lives. Espiritu Santo, Rio de Janeiro, São Paulo and espe- *castaneus.* cially common also at Blumenau, in Santa Catharina; also in Paraguay, but very rarely. — **castaneus** *Stich.* Upper surface very dark; oblique band continuous to the lower median vein, then broken up; hindwing unicolorous. Under surface very bright, with large eye-spots. ♀ larger, almost as in typical *cassiae*, but the markings at the distal margin of the hindwing indistinct. Specimens sometimes occur with the band of the fore- *rubigatus.* wing much lighter and abbreviated, recalling *tamarindi*. Central America and Colombia. — **rubigatus** *Stich.* Forewing of the ♂ somewhat broader, apex less pointed, the band generally as in the typical subspecies, occasionally somewhat widened, posteriorly complete to the extreme end, or here sometimes indistinct. Hindwing with some small apical spots, which are sometimes continued as washed-out rust-red crescentic spots at a short distance from the margin. Hinder angle behind the cell more or less tinged with dark rust-red. Other- *strophios.* wise like typical *cassiae*; the form shows all transitions to this. From Coca in Ecuador. — **strophios** *Fruhst.* Band of the hindwing mostly at some distance from the distal margin, prolonged nearly or quite to the anal angle, much as in the typical *cassiae* ♀. Likewise connected by transitions with the neighbouring forms. Coroico in Bolivia.

zelotes. **O. zelotes** is split up into 2 local races: **zelotes** *Hew.*, from Colombia. ♂ above dark brown, forewing oblique band; this is of medium breadth, on the inner side rectangularly bent posteriorly, terminating in a point just before the median vein. In the apical area 3 small white spots. ♀ unknown. — **zelus** *Stich.* Shape *zelus.* of *O. cassiae*, but somewhat larger, the apex of the forewing pointed. Upper surface dark brown, beyond the cell of the forewing a sharply angled band placed as in the typical subspecies, but broader, fuller-margined, posteriorly tapering to a point not far from the distal margin directly before the submedian. In typical *zelotes* this band is rectangular on the inner side, here only obtusely curved, but its peculiar position affords a characteristic and unmistakable distinction from *O. cassiae*. Equally unmistakable are the differences on the under surface. It shows in the forewing a grey-brown basal and cellular area with simple, undulate transverse lines, arranged in peculiar figures, in the anterior part of the distal area a triangular patch with very fine transverse striation. The hindwing has a strong violet tone and is quite finely watered with blackish wavy lines and whitish shading. Scent-organs as in *O. cassiae*. Type: 1 ♂ in coll. Staudinger. Panama: Chiriqui.

O. tamarindi extends northwards to Mexico, otherwise its area of distribution coincides with that of *O. cassiae*, but the geographical branch-races differ more considerably, so that many forms from the Andean region are further removed from the name-type. The synonymy of the branch-races has not yet been satisfactorily cleared up, as neither the earlier authors nor Stichel and myself observed that **tamarindi** *Fldr.* *tamarindi.* (= xiphos *Fruhst.*) (61 b) came from Venezuela, and so it comes about that a more northerly race differing considerably from *tamarindi*, and which I now call **sikyon** subsp. nov. (still figured, 61 b, under the old name *sikyon.* *tamarindi*) passes as *tamarindi* and was also figured as such by Godman and Salvin in the celebrated Biologia Centrali-Americana. Our figure of the ♀ is defective as regards the hindmargin, and an extended red-brown tinge on the upperside of the hindwing is not brought out. In the ♂ the upper surface is dark brown, the distal margin anteriorly grey-brown. Band of the forewing dirty white, in its posterior part sometimes brownish, anteriorly of approximately uniform breadth as far as the middle median vein, on the veins somewhat incised on both sides, then constricted or narrowly interrupted by the middle median and the submedian, thus posteriorly broken up into two spots, the second placed at the margin of the wing close to the hinder angle, as an elongate, curved point. Hindwing with a lighter patch or spots at the apex, dirty white or brownish, and from there onwards with a dull rust-red posteriorly washed-out, narrow undulate or curved band near the margin. Anal area beyond the cell, about between the submedian and the upper median vein, more or less strongly tinged with rust-red. Anterior eye-spot on the under surface ovalobliquely placed, distally obliquely flattened, only narrowly margined with black-brown. ♀ larger, with broader wings, apex more obtuse. Band of the forewing whitish as far as the posterior point, broader and more complete. Light patch in the apex of the hindwing more distinct, becoming almost a band, the adjacent undulate line near the margin better developed. ♂ type from Tepic, West Mexico. Type of the ♀ from San Pedro Sula, Honduras, in coll. Fruhstorfer. *sikyon* was also recorded by Godman from Orizaba and other places in Mexico and said to be distributed throughout the whole of Central America to Colombia. — **kleisthenes** *Fruhst.* is the brilliantly coloured *kleisthenes.* continuation of *sikyon*, from which it is distinguished by the more intensive velvety brown tinge in the basal area of the forewing and the dark chest nut-brown discal part of the hindwing. The forewing bears further a more compact, lighter yellow transverse band of almost uniform breadth and the hindwing has a broad terminal border, anteriorly light gold-yellow, posteriorly reddish. Under surface paler, more washed-out than in *sikyon*, more brown-yellow instead of grey-black. The yellowish subanal band of the forewing more strongly marked, broader, more pronounced in colouring. Anal ocellus of the hindwing with light brown foreground. Collected in September on the road to the Quindiu Pass, West Colombia, at about 1500 m. — **cherocles** *Fruhst.* *cherocles.* closely approximates to typical *tamarindi Fldr.* from Venezuela, as we frequently observe in species from eastern Colombia, but *cherocles* is sharply distinguished from the name-type by the presence of a distinct, moderately broad and only short marginal band on the hindwing, of reddish ochre-yellow colour, extending from the upper radial to the upper median. The transverse band of the forewing is narrower, deeper ochre-yellow, strongly narrowed at the middle median, the adjacent but well isolated spot more wedge-shaped; under surface darker than in Venezuelan specimens, the anal band more ample, somewhat more vertical. Upper Rio-Negro, East Colombia, discovered by A. H. Fassl at 800 m. ♀ with light ochre-yellow transverse band on the forewing. Hindwing with broad ochreous distal border, running as a band to the upper median and from there to the anal angle as a subterminal undulate line. Hindwing beyond the cell with a dark rust-red area. — **corrosus** *Stich.*, in *corrosus.* my collection represented by three examples, has a somewhat narrower band on the forewing than in our figure of *xiphos*, of dirty white to pale brownish colour, commonly abbreviated and narrowed posteriorly. Hindwing unicolorous chestnut-brown. ♀ not differing materially from that of *sikyon*. Ecuador, not very rare. f. **spadix** *spadix.* *Stich.* has the band of the forewing narrow, partially broken up into spots, brownish instead of white-yellow. Singly among the normal form. Balzapamba, Ecuador, in July. — **incolumis** *Stich.* The wings broader. The *incolumis.* oblique band of the forewing narrowed in the cell by tooth-like indentations of the ground-colour, much as in *quiteria*, but in the ♂ chalk-white and towards the anal angle more strongly narrowed and terminating in a point at the submedian, in the ♀ light yellowish. Also on the under surface the band of the forewing is pure white; anterior eye-spot of the hindwing smaller than in *bogotanus*. In my collection from Pozuzo, Peru and from Bolivia. — **terenzius** *subsp. nov.* is based on the figure of a ♀ given by Staudinger in the Exotic *terenzius.* Butterflies 1888 pl. 72, which came from Santa Catharina, where Dr. Fritz Müller also found the larva mentioned in the description of the genus. The ♀ differs from that of *sikyon*, which it closely resembles, in the white median band of the forewing terminating at the lower median; under surface of the forewing costally less, anally more broadly tinged with white than in Mexican examples.

bogotanus. **O. bogotanus** inhabits Colombia. Imago very large, above nearly black, velvety, with dull purple gloss. Transverse band narrower than in *sikyon*, composed of separate, nearly white spots, which in their turn are again dusted with purple. Hindwing with the hair-pencils which are also so characteristic of *tamarindi:* a very broad, bushy one beyond the praecostal cell, a somewhat smaller one before the apex of the cell and a third, of yellowish or blackish hairs, in the bare friction-patch of the inner margin. Under surface especially brilliant, the subapical part white, basal area sharply contrasting with it, dark cocoa-brown. Apical ocellus of the hindwing unusually large, almost suggesting those of the *Caligonae*. Two local forms: **bogotanus** *Dist.* Type probably from Muzo, as the species scarcely seems to ascend above 1000 m.; very large with the distal margin of both wings boldly projecting. Forewing with a whitish, purple-edged oblique band, composed of irregular, isolated spots not placed in regular alignment. Under surface of the hindwing predominantly light brown. — *phrataphernes.* **phrataphernes** *Fruhst.* was recently discovered by Fassl, is smaller than the name-type and presents a melanotic extreme of the collective species; a phenomenon which is parallelled in *O. quiteria* from the same localties and which we also observe in *O. tamarindi*, of which the brightly coloured branch inhabits the West Cordilleras (*kleisthenes Fruhst.*), whilst the dark (*cherocles*) occurs together with *phrataphernes*. ♂ with the band of the forewing dull yellow, narrow and more uniform. Ground-colour deeper black than in Muzo examples. ♀ with relatively narrow white transverse band on the forewing and a distinct marginal border on the hindwing, but scarcely more than 1 mm. in breadth, which is anteriorly whitish, posteriorly yellowish, and terminates at the lower radial. Under surface of the ♂ with yellowish instead of white band on the hindwing; in the ♀ the band is broader and chalk-white. Apical ocellus of the hindwing somewhat smaller than in *bogotanus*, more quadrate instead of oval. The striation of the median part more delicate and placed on a darker ground than in *bogotanus*. Upper Rio Negro, from elevations of 800 m. *O. bogotanus* was treated by Stichel as the Colombian branch of *O. tamarindi*. But the discovery of two actual local forms agreeing in habitus with *O. tamarindi*, one of which even flies together with *bogotanus phrataphernes* in the same localities, removed the last doubt as to the specific status of this *Opsiphanes*, which already differs from *tamarindi* in its size. The egg of this beautiful Brassolid is somewhat larger than that of *Sphinx ligustri*, elongate-rounded, cream-yellow with fine longitudinal grooves. The larva nearly approaches the long known *tamarindi* larva, is merely of a lighter green and with 2 (*tamarindi* 1) dorsal lines of a less glaring red. Food-plant: holly. The cremaster of the pupa is strongly curved proximad and the forewing-case has the inner margin projecting acutely, which gives the chrysalis a boat- or rather gondola-shaped appearance; it is of grey-green colour. As with most Brassolids the eggs are laid readily even in captivity, and in good numbers. I believe that in future attempts to breed South American butterflies in temperate climates the Brassolids will take the first place. For besides the circumstance just mentioned two other factors of importance have to be considered. The food-plants (species of banana and palm) thrive very well even in quite temperate climates if taken care of and protected from frost, and the plants are propagated not primarily by seeding, but most rapidly and abundantly by suckers. Moreover, the insects do not pair in the sunshine, as in most other families of Diurni, but during the flight of the butterflies in the evening and morning twilight (Fassl).

O. quiteria is one of the most widely distributed species of the genus and is met with from Central America to Bolivia and on the Atlantic side from Guiana to Paraguay and Santa Catharina. In the most northerly race the sexes are dimorphic and the Colombian subspecies differ strikingly from the name-type. Larva green sprinkled with white dots, lives on palms. — *quirinus.* **quirinus** *Godm.*, described from Guatemala, in my collection from Honduras, extends as far as Panama, but is considered very rare. ♂ above with an ochreous band posteriorly lost in the ground-colour and two very large white subapical patches. Hindwing predominantly red-brown with traces of a yellow band between the radials. ♀ with white transverse band on the forewing, hindwing entirely chestnut-brown, before its terminal margin with three rounded yellow spots between the radials. — *quiteria.* **quiteria** *Cr.* (61 b), originally described from Surinam but also known from the Lower Amazon, has the ochreous band on the forewing of the ♂ broader than in *quirinus*. The ♀ varies only inconsiderably in the extent of the short subcostal band on the hindwing. — *obidonus.* **obidonus** *Fruhst.* (62 d), the form from the Middle Amazon, differs from *quiteria* from Surinam as follows: ♂ with the yellowish oblique band on the forewing narrower, submarginal band of the hindwing longer and narrower. ♀ with the half-band on the forewing more sharply incised proximally and distally; submarginal band of the hindwing narrower, and sharply expressed as far as the 1st median vein; the anal area broadly suffused with red-brown nearly to the cell. Obidos, August and September. Coll. Fruhstorfer. — *mylasa.* The race from the Upper Uaupes may be introduced as **mylasa** *Fruhst.* and is at once conspicuous by the much widened, orange band on the forewing. The yellowish antemarginal band of the hindwing is entirely obsolete anteriorly and only marked by 3 obscure round dots of the size of a pin's head, but below the second median is continued to the anal angle as a slightly glossed, narrow, sharply defined stripe. *mylasa* forms the transition from *quaestor Stich.*, found on the eastern slopes of the Andes in Ecuador, to *obidonus Fruhst.*, and from this to the name-type from Surinam. The hindwing in *mylasa* appears rounder, less dentate than in the other *quiteria* forms, and the yellowish band of the forewing is narrower than in *quaestor*. — *augeias.* **augeias** *Fruhst.* A strikingly light geographical subspecies without near allies. ♂ best compared with *O. badius Stich.* from Muzo, but the shape of the wings still more uneven, more undulate. Band of the forewing broader than in *badius*, yellowish, with a slight tendency to whitish. Basal area less rust-red than in *badius*. Hindwing nearly chestnut-brown, with the exception of a black undulate distal border and a black transcellular area. From the costal to the upper median vein runs a quite vertical, light ochre-yellow band of medium breadth, composed of three fragments. ♀ on the whole like the ♂, the transverse band of the forewing white, slightly inclining towards cream-colour, the subapical band of the hindwing continuous, broader and paler yellow than in the ♂. Hindwing lighter rust-brown, the black area somewhat washed-out and reduced. Under surface approaching that of *quirinus*, but distinguishable at once by having the band of the forewing broader and lighter yellow in the ♂♂ and posteriorly more diffuse in the ♀♀. From the Rio Aquaca Valley in the West Cordilleras, Colombia, at about 2000 m. — *phylas.* **phylas** *Fruhst.* In this pronounced local form the differentiation has proceeded further than in *augeias* and one might be tempted on account of the markings of the upper surface to regard it as a separate species were it not that the character of the underside demonstrates its identity. ♂ above black. The red-brown parts of *augeias* changed into an extremely characteristic grey-black colour, otherwise entirely unknown in the genus, but standing out little from the deep black ground-colour. Band of the forewing shorter than in *augeias*, only reaching to the lower median, narrower and of a dark straw-yellow slightly clouded with grey at the edges. Hindwing only with two remnants of an obsolete yellowish subapical band. ♀ recalling that of *O. badius*, the forewing bearing a very broad, nearly cream-yellow transverse band, which, however, is more regular and between the medians more extended. Hindwing with three isolated subapical patches, which are strongly marked, although less so than in *augeias* ♀. Ground-colour somewhat duller than in the ♂, uniformly black with dull brown reflection. *phylas* consequently forms the melanotic extreme of the collective species as it occurs in Colombia, but there is no connecting-link known with the Amazon races as, say, in the East Colombian *Eryphanis*. Under surface likewise darker than in *augeias*. ♂ with shorter, deeper yellow transverse band on the forewing, in the ♀ considerably broader, particularly between the medians, where it becomes cream-coloured with a slight purple gloss, but towards the costal margin changes into a chalk-white area delicately irrorated with black. Hindwing dark grey, not relieved with reddish discally and distally as in *augeias*. The darker under surface in conjunction with the broad bands will also at once separate *phylas* from *quirinus*. Upper Rio Negro, East Colombia, 800 m. Collected by A. H. Fassl. By the discovery of these two divergent and highly specialized *quiteria* races the interesting tendency of Colombia to produce parallel, representative, but nevertheless strikingly differentiated forms is again illustrated, and at the same time new light is shed on the unexampled richness of this country in species. The existence of these local races approaching the general *quiteria* type further renders it possible to separate *O. badius Stich.* as a distinct species, just as the discovery of two genuine Colombian local forms of *O. tamarindi* resulted in the specific rehabilitation of *O. bogotanus Dist.* — *quaestor.* **quaestor** *Stich.* Above especially deep black, only the apex of the forewing slightly lighter. Band of the forewing distally much widened. Hindwing only with traces of a faint submarginal band of reddish spots. Under surface more brightly shaded. 1 ♂ from Coca, Ecuador. — *bolivianus.* **bolivianus** *Stich.* has the ground-colour of the upper surface lighter, the band darker, reddish brown. Hindwing with distinct macular band before the distal margin. Nearest to *meridionalis*, but distinguished by the broader, darker band on the forewing. Bolivia. — *quirinalis.* **quirinalis** *Stgr.* Band of the forewing bone-yellow to ochre-yellow or nearly white, slightly dusted with brown; hindwing above with 2 or 3 whitish or yellowish spots at the apex, or sometimes with a reddish submarginal macular band. Peru, Ecuador, west of the Andes (?). — *philon.* **philon** *Fruhst.* (61 c). The differences which are shown in *obidonus* become still more pronounced in *quiteria* from Espiritu Santo, the most beautiful geographical form yet known. The deviation from the type from Surinam consists in: (♂) hindwing less undulate, upperside of abdomen and entire basal part of hindwing with long dark brown-red hairs, much as in *quirinia Godm.* from Central America. Submarginal band of the hindwing continued as far as the 3rd median vein, lighter yellow-brown, more sharply defined, in the anal angle broadly and diffusely dark red, confluent with the red basal colour. Under surface: much darker, more copiously shaded with black, especially in the cell of the forewing. Anal and distal areas of the hindwing commonly with a violet tinge. The white, slightly diffuse spot below the submedian of the forewing reduced. ♀: the yellowish band of the hindwing sometimes continuous to the anal angle, at least twice as broad as in the ♂, anally even wider, brilliant red-brown, the red shade reaching the cell. Espiritu Santo, Rio de Janeiro. As a sort of satellite of *philon* there occurs with it also what may be called an analogous, mimatic race of a second species, namely of *invirae Hbn.*, which by the deeply incised and unusually broad yellowish bands on both wings forms at the same time the most strongly marked of all the *invirae* forms. — *meridionalis.* **meridionalis** *Stgr.* ♂ always smaller than *philon*, forewing with the apex less pointed and the distal margin more shallowly excised than in *quiteria*. Oblique band in this form somewhat variable, sometimes terminating in a very sharp, sometimes in an obtuse point. In the distal part of the cell occasionally a blurred yellowish patch. Hindwing with the distal margin less dentate,

although still strongly undulate (particularly at the median veins), near the distal margin with complete band, well developed to the hinder angle, its posterior part more or less shot with reddish, somewhat weakly coloured; there is also a faint rust-red tinge in the part of the wing which adjoins this anteriorly. ♀ of the same shape as the preceding subspecies, as a rule with the ground-colour somewhat paler, forewing not essentially different, the hindwing near the distal margin with a very broad band, which is anteriorly pale to red-yellow, from the middle onwards changes gradually into a bright rust-red and posteriorly is diffused into a large, vaguely defined rust-red area, gradually shading into the ground-colour. Forms transitions to the preceding race. Larva cylindrical, thickened in the middle, green, sprinkled with white dots, further with dark dorsal and lateral lines and stripes and yellow stigmata. Head yellowish, brown-striped, with reddish horns. Anal end with long tail-fork. Lives on palms. (According to Burmeister, *Pavonia quiteria.*) *meridionalis* differs from *philon*, apart from its smaller size, chiefly in having the band of the forewing in the ♂ broader and paler yellow, in the ♀ narrower and more sharply defined. The hindwing has the anterior part lighter and the anal area clearer red-brown than in *philon*, also the general colouring of the under surface is always paler, more washed out, with the submarginal area predominantly yellow, hence more gaily coloured than in more northerly forms. The yellow oblique band on the forewing beneath appreciably narrower than in *philon*, also in the ♀. Santa Catharina, probably also in Parana; not yet observed in Rio Grande do Sul. In São Paulo and Paraguay on the other hand transitions occur and the examples before me approximate to *philon* in the deep colour of the under surface, to *meridionalis* in the narrow band on the forewing beneath, and differ from both in the more extended and much darker chestnut-brown tinge of the anal area on the upperside of the
oresbios. hindwing. If this race is constant it might be called **oresbios** *subsp. nov.*

badius. **O. badius** *Stich.* Hindwing strongly dentate. Band of the forewing contracted into a narrow yellowish white macular band. This is placed close to the cell, touching its posterior angle, but is anteriorly more or less indistinct as far as the subcostal and runs obliquely nearly to the distal margin at the lower median vein. Sometimes it is prolonged beyond this into a curved point at the hinder angle. Hindwing without spots and bands, but strongly tinged with rust-red in the anal and basal area. Under surface very brightly marked and differing from the preceding subspecies only in the narrower band of the forewing. The ♀ (hitherto unknown) is considerably larger than the ♂. Forewing predominantly black, only towards the base slightly tinged with rust-red — the pure white oblique band about three times as broad as in the ♂; hindwing deep rust-red with narrow black terminal border. ♂ very similar to *quirinus Godm.* ♀, however, larger. Band of the forewing more broken, hindwing above without the subapical rudiments of a yellowish band. The white transverse band on the underside of the forewing considerably broader even than above, also more extended than in *quirinus*. *badius* was united by Stichel with *quiteria*. But the discovery of two further races more nearly allied to *quirinus* makes it seem advisable to raise this form, which is strikingly different in the ♂, to specific rank. Locality Muzo, 400—800 m., Colombia.

camena. **O. camena** *Stgr.* Dark brown. Basal area paler brown, apical part black-brown. Distally to the cell runs a narrow ochre-yellow macular band, which is anteriorly closed and obliquely placed, sharply angled in posterior direction on the lower radial, and broken up into separate, irregular spots standing in the interneural spaces. It terminates in a double spot in the hinder angle, immediately before the submedian. Near the apex there is a small white double spot and behind it a somewhat larger white spot. Under surface pale brown with dentate and curved lines, which form irregular darker figures. Near the apex the three small white spots of the upper surface, between the radials a black, yellowish-ringed eye-spot finely bordered with black-brown. Distal area brown, posteriorly yellowish, near the margin two dentate lines, which disappear towards the hinder angle. Hindwing with the distal margin strongly undulate, with ochre-yellow lunular spots and a row of curved or lunular spots of the same colour near the distal margin, as well as the two hair-pencils, in the cell and at the submedian, characteristic of the group. Under surface pale brown. Anteriorly, somewhat beyond the middle of the costal margin, a large, oval, obliquely placed eye-spot, which is proximally clouded with brown, bears a white curved streak and is margined with black-brown. A second, rounded eye-spot beyond the cell near the hinder angle is black, dusted with yellowish, anteriorly edged with white, ringed with yellow-brown and finely margined with black-brown. Costal margin strigulated with white. Across the cell runs an irregular brown transverse band; base of the wing dark brown. The rest of the wings clouded, striated and marbled with black-brown. Not far from the distal margin there is a row of lunular spots composed of very dense striation, showing up lighter against the darkened distal border. ♀ larger than the ♂, apex of the forewing less produced, subapical patches purer white, all the ochre-yellow bands strikingly widened and lighter, particularly on the forewing, basal area and cell of the forewing as well as the whole upper surface of the hindwing rust-red. The black submarginal band of the hindwing bordered with ochre-yellow on both surfaces. Forewing beneath with broad whitish, purple-tinged transcellular area, the submedian area broadly ochre-yellow to the base. Hindwing lighter brown with lighter bordering to the ocelli than in the ♂. Colombia, West Cordillera, Rio Aguaca Valley, about 2000 m. According to Fassl the egg is similar in size and shape to that of *O. bogotanus Dist.*; it is merely more green-yellow and less transparent; the longitudinal grooves have sharper edges. He more than once observed the eggs laid on the underside of the leaves of a species of palm with non-feathery fronds of a metre in length, in groups of 4—12, arranged in 1 or 2 rows, regularly one beside another. Whilst *bogotanus* inhabits the lower mountains regions together with *Caligo epimetheus*, *camena* shares its area of flight with *Caligo oberthueri* in the untrodden marshy primeval forests of the higher mountain districts. Fassl several times observed *camena* ♂♂ shortly after sunset at places where cattle were feeding; they would suddenly run for a short distance on the short turf, then rest on a piece of cow-dung for a moment with the antennae raised high, digging greedily into it with the proboscis, the next moment again running a short distance and repeating the same performance; at the same time they are extremely shy and fly away even when cautiously approached before one can get near them. The very rare and much larger ♀ has the ground-colour entirely chestnut-brown, possibly hitherto quite unknown and undescribed (Fassl).

O. sallei approaches *quirina* and splits up into four geographical races, all more or less rare. — *sallei.* **sallei** *Westw.* is dark brown; forewing at the base slightly tinged with reddish. Transverse band complete to the upper median vein, there strongly bent distad, afterwards broken up into spots; the last is small and pointed, following the curve of the hinder angle and terminating at the hindmargin. On the under surface the separate spot in the middle median cellule occupies the entire breadth of this and is slightly connected with the transverse band distally. Hindwing with rather broad distal band, notched on the veins and gradually displaced at the lower radial, anteriorly light ochre-yellow, darkened from about the upper median vein, towards the hinder angle becomes rust-red and is anteriorly widened but ill-defined. Venezuela, Colombia. — *mutatus.* **mutatus** *Stich.* Band of the forewing broader, somewhat darker reddish ochre-yellow, smooth for its whole length or in the upper median cellule only obtusely indented proximally the connecting spot, however, anteriorly adjoining the anterior part of the band for its entire breadth, posteriorly completely connected with the following band-spot or only separated by the vein. In the distal part of the cell sometimes an obscure brownish spot. Hindwing near the distal margin with considerably narrowed band, which mostly terminates at the upper median; when longer it is gradually lost in the ground-colour as a vague reddish clouding and becomes narrower, instead of widening and becoming diffuse. The distal margin somewhat less dentate. Ecuador. — *farrago.* **farrago** *Stich.* ♂ with somewhat paler ground-colour, basal area of the forewing tinged with dull rust-red. Band of the forewing as in the preceding subspecies. Band of the hindwing much widened (as much as 4—5 mm.), less notched at the sides than in the typical subspecies and distinctly expressed as far as the lower median vein, but before that already somewhat clouded with reddish, at its termination in the hinder angle rust-red, ill-defined and anteriorly diffuse, so that the hinder angle and basal area of the wing appear predominantly pale rust-brown. Under surface weaker marked, the striation of the hindwing in particular less sharp, the ground-colour lighter, whitish-brown. The separate yellow spot in the middle median cellule of the forewing smaller, oval, quite isolated, a character which, however, must not be considered as distinctive. Southern Peru, Bolivia. — *nicandrus.* **nicandrus** *subsp. nov.* Distinguished from the preceding races by the considerably narrower red-brown band, which is broken between the median veins into separate crescentic spots. Upperside of the hindwing scarcely appreciably tinged with rust-red. Underside of the hindwing much darker brown, with purple, more dusky tinge. Coroico, 1200 m., Bolivia.

O. invirae occurs everywhere together with *quiteria* and must be regarded as a slightly differentiated species, which in its southern offshoots can scarcely be separated from the southern races of *quiteria Cr.* and in its northern forms, at least on the under surface, is not distinguishable from *cassina Fldr.* Yet the larvae probably differ decidedly; according to Bönninghausen they are more unicolorous than those of *quiteria*, which bear bright-coloured stripes. Feed on palms. — *relucens.* **relucens** *Fruhst.* ♂: similar to *remoliatus*, but smaller. Band of the forewing broad, light ochreous, strongly curved and extending to beyond the submedian in almost uniform breadth; its posterior spot sharply defined, rounded. Band of the hindwing anteriorly yellowish, from the upper median vein onwards rust-red and distinctly defined, reaching to the hinder angle, but narrow and uniformly deeply notched distally. Under surface in the type-specimen with broader yellow band on the forewing and larger eye-spots than the typical subspecies; between the eye-spots a chain of 4 whitish grey crescentic spots. Length of the forewing 36 mm. Honduras (San Pedro Sula). — *cuspidatus.* **cuspidatus** *Stich.* ♂: forewing with very pointed apex. Distal margin very narrowly bordered with grey. Band of the forewing only complete to the lower median vein, beyond this sometimes a further small obsolete terminal spot. Basal area reddish grey. Band of the hindwing very narrow, darkening to rust-red at the radials and gradually disappearing. Anal area slightly tinged with reddish. From the Volcan de Chiriqui. — *invirae.* **invirae** *Hbn.* ♂ with narrow band on the forewing, the proximal margin of which is not at all or only very little produced into a tooth behind the cell; at the middle median vein it is somewhat displaced at both sides and at the lower median slightly constricted. For the rest it is rather sharply defined and smooth; the posterior part of the band bends in a curved, pointed hook in the hinder angle towards the hindmargin and mostly extends beyond the submedian, although less distinctly expressed. The eye-spot near the apex and the anterior part of the lines near the distal margin on the under surface showing through rather distinctly. The band near the distal margin of the hindwing narrow, sometimes almost broken up into spots and abbreviated, occasionally extending to the hindmargin, dull rust-red. ♀ larger, paler; forewing more elongate, distal margin less excised. Band of the forewing pale ochre-yellow, lighter anteriorly than posteriorly, broader than in the ♂, behind the angle of the cell distinctly produced into a tooth, at the median veins less displaced or constricted. Band of the hindwing broader, but mostly duller, in the posterior part suffused with reddish brown without distinct demarcation, much as in *O. quiteria meridionalis.*

Distinguishable from the latter, apart from its smaller size, chiefly by the undulate distal margin of the hindwing, the finer striation on the under surface and the more pointed apex of the forewing. Guiana, northern Brazil, Venezuela. *ledon.* — **ledon** *subsp. nov.* forms a transition from *invirae Hbn.* to *intermedius Stich.* from the Upper Amazon and differs from the name-type in its larger size and the darker oblique band of the forewing, which is narrowed towards the costa, and posteriorly runs out into quite a narrow point. Lower Amazon. *intermedius.* — **intermedius** *Stich.* is larger, band of the forewing much widened, of a somewhat darker reddish ochre-brown colour, proximally with a strongly projecting tooth, at this point 8 mm. in breadth, at both sides without or only with very slight notches on the veins, towards the end rapidly narrowed, terminating in a sharp point. The band is thus nearly straight to beyond the submedian and only somewhat curved at the posterior end. Band of the hindwing narrow, anteriorly of an indefinite ochre-yellow, almost broken up into loosely connected spots, towards the hinder angle rust-red and more continuous, but ill-defined. Under surface more brightly coloured, but the striation fine and regular. Upper Amazon. *sticheli.* — **sticheli** *Röb.* has the band of the forewing in the ♂ light ochre-yellow, posteriorly pretty uniformly narrowed, between the upper and middle median veins incised; it terminates in a small elongate spot before the submedian. Band of the hindwing anteriorly marked by three separate small yellowish spots; it widens at the lower radial into dull rust-red, connected, crescentic spots and is diffused in the hinder angle. Somewhat variable in the composition of the band on the hindwing and the breadth of that on the forewing and in general very similar to the typical subspecies. The hitherto unknown ♀ approaches *amplificatus Stich.* from Paraguay; band of the forewing somewhat narrower, more strongly dentate proximally between the medians, of somewhat more reddish yellow colour. On the hindwing the three subapical anterior spots stand out more distinctly from the posterior bright rust-red part of the band, which is more broadly diffuse anally. Under surface darker than in *amplificatus*, approximating more to that of *remoliatus Fruhst.* in the deep ochre-yellow anal band on the forewing. Colombia, type probably from the Cauca Valley, both sexes also found by Fassl on the Upper Rio Negro at about 800 m. *amplificatus.* — **amplificatus** *Stich.* is a typical Paraguay butterfly, of small size, smaller than *remoliatus*, with somewhat lighter ochre-yellow band on the forewing, and more closely and sharply dentate submarginal band on the hindwing, ♀ with predominantly yellow transverse band on the forewing and paler, posteriorly only inappreciably red-brown submarginal area. Under surface strikingly pale. Ocelli smaller than in *remoliatus*. Paraguay. *remoliatus.* — **remoliatus** *Fruhst.* (61 a ♂; ♀ 61 a as *meridionalis*). ♂: small apical spots yellow instead of white. ♀: apical spots larger and purer white. Transverse band of both wings darker ochreous, more sharply defined especially in the proximal part, and the band of the hindwing in the ♂ costally narrower, anally broader, darker rust-red. Distal border of the hindwing more broadly black, wings still less excised. Under surface with darker hatching, ocelli larger than in *amplificatus*. Larva on Giriva leaves, where it is difficult to find on account of its green colour. Pupates in November or December and again in June. The pupa is light green with a golden dot at each side. The butterfly emerges after 20—30 days; it is mostly common and hides among palms. ♂ type from Santa Catharina, ♀ type from Rio Grande do Sul. In the latter province *remoliatus* is by far the commonest species of *Opsiphanes*. According to 12 ♂♂ and 10 ♀♀ in coll. Fruhstorfer it is very constant, varying only inconsiderably in size and not at all in colouring. *agasthenes.* — **agasthenes** *Fruhst* differs from *amplificatus Stich.* in its larger size; much darker colouring; oblique band of the forewing in 2 examples deeply incised beyond the cell as in *quiteria*, band of the forewing behind the cell with unusually strong teeth; band of the hindwing rather narrow, sometimes almost like a string of pearls, but posteriorly widened and rust-red. Under surface much darker, all the ocelli larger and more broadly ringed with black. *rectifasciata.* **rectifasciata** *Fruhst.* is is an aberration in colour markings. Band of the forewing narrower, darker ochre-yellow, running almost rectilinearly, i. e. neither proximally nor distally considerably incised. Peru: Pozuzo. *isagoras.* — **isagoras** *Fruhst.* In accordance with its geographical position *isagoras* approximates more to *amplificatus Stich.* than to *agasthenes*. It differs from both: in the more ample transverse bands of the forewing, deeply incised proximally, recalling *quiteria*, and the extended submarginal bands of the hindwing, which are especially strongly widened costally and are anally lighter red than in *androsthenes*. Beneath the forewing is lighter, the hindwing darker than in *amplificatus*; the anal ocellus of the hindwing larger, more oblong. Bolivia: Cochabamba. *pseudophilon.* — **pseudophilon** *Fruhst.* (61 d ♀). Habitus about as in *amplificatus Stich.* from Paraguay. Yellow band of the forewing strongly curved, particularly beyond the cell. Band of the hindwing light yellow to the upper median, then much widened, as a dark brown continuation, but sharply defined to the anal angle. Both the yellow and the red-brown section of the band distally much more deeply incised than in any other *invirae* form. In the cell of the forewing in the ♀ near the apex the beginning of a reddish yellow patch. Espiritu Santo.

O. cassina cannot be separated beneath from *O. invirae* by any very salient character, but may be easily known above by a mostly complete, nearly quadrate, ochre-yellow or rust-red spot before the apex of the cell of the forewing. *cassina* is at the same time confined more to the northern part of the range of *invirae*, it extends indeed on the Andean side parallel with *invirae* and *quiteria* as far as Bolivia, but on the Atlantic coast it probably does not reach beyond the Lower Amazon and so far as our present knowledge goes is already wanting in Central Brazil. It would appear that the dry climate of the provinces of Piauhy, Ceara and Bahia, which, however, are practically unexplored, stands in the way of its spreading in this direction. *fabricii.* — **fabricii** *Bdv.* (61 d), previously known from Guatemala to Panama, was quite recently sent to me also from Tepic, West Mexico. The ♂♂ of this subspecies are mostly small with the apex of the forewing but little pointed, the distal boundary of the distinctly forked band little or not at all constricted. In the ♀♀ the proximal forked part is mostly obsolete in the cell, the colour of the cell itself ferruginous. Hindwing only in the anterior part with ill-defined submarginal band, this fades out between the radials, changing into rust-brown and grey-red, and this colour spreads over almost the whole surface of the wing, starting from the anal part. The form recurs in Colombia and western Ecuador with trifling modifications, the ♂♂ are on an average somewhat larger and more brightly coloured, without, however, any specific distinguishing marks being recognizable. The distribution of *O. c. fabricii* may therefore be accepted as given above. — **chiriquensis** *Stich.* seems to occur *chiriquensis.* exclusively at the Volcan de Chiriqui, Costa Rica. Of considerable size, ♂ with the apex rather pointed and the distal margin of the forewing strongly convex posteriorly. Band of the latter very broad throughout, bright rust-yellow, distal boundary but little constricted, in this respect almost agreeing with *fabricii.* Fork distinct, proximal part broad in the cell, narrowly connected with the main band. Costal margin of the hindwing broadly reddish to the upper radial, particularly at the base and at the apex. Band of the hindwing very broad, broader than in any other form of the species, anteriorly red-yellow, in the middle changing into rust-red, towards the hinder angle widened, without becoming diffuse. Under surface especially bright. ♀ very dark brown, band of the forewing broadly yellowish, fork distinct. Hindwing near the distal margin with broad band, which is anteriorly yellowish, then widened and rust-red, in the anal area broadly diffuse, as in *invirae amplificatus.* — **numatius** *subsp. nov.*, from Colombia without more exact locality, approaches *chiriquensis* in size, but in the *numatius.* shape of the bands more resembles the more southerly *notandus*, differing, however, from both in having the proximal cell-spot of the forewing free and unusually elevated at its distal end. Band of the hindwing much as in the broad-banded *fabricii*, but posteriorly darker rust-red. The under surface also much deeper, darker brown; apical eye-spot of the hindwing more broadly and distinctly ringed with brown than in *fabricii.* — **periphetes** *subsp. nov.*, which may be distinguished from *numatius* by its small size, approaches *merianae* from *periphetes.* Surinam in this as well as in the strikingly narrowed submarginal band of the hindwing, which sometimes disappears altogether at the upper median. It also agrees with *merianae* in having the ochreous transverse band of the forewing considerably narrowed towards both the costal margin and the anal angle. Colombia; more exact locality unknown. — **cassina** *Fldr.*, type in the Tring Museum, was first brought to Europe from the Upper *cassina.* Rio Negro. ♂ comparatively large, length of the forewing 42 mm. Band of the forewing broad, about as in *O. quiteria meridionalis Stgr.*, also resembling this in the shape, i. e. distal border without constriction, regularly oblique, directed towards the inner angle. Proximal part of the fork formed by the discocellular obscure and present as an isolated spot. The band of the hindwing rather broad next to the apex, gradually narrowing and changing into a rust-red colour, vaguely diffused at the anal angle. — **merianae** *Stich.* is the form indigenous *merianae.* to Guiana, with distinctly forked band, the ♂ with very pointed apex and strongly convex distal margin to the forewing. This form may be easily and certainly distinguished from all others by the shape of the forked oblique band of the forewing. At the fork the band as a rule projects proximad as far as the angle at the origin of the middle median, its distal boundary is strongly constricted between the middle and upper medians, and it runs into the inner angle essentially narrowed, pointed and somewhat curved. The constriction at the distal boundary and the narrowing behind this constriction are quite characteristic. The submarginal band of the hindwing is moderately narrow, sometimes complete, sometimes reaching only to one-half or beyond it; as a rule it becomes darker brown towards the anal angle, but not rust-red. ♀ similar to that of the preceding form, but smaller, less intensively coloured, the submarginal band of the hindwing not widened in the anal part to the same extent as in that, and not much diffused. — **aequatorialis** *Stich.*, from eastern Ecuador. *aequatorialis.* Similar to the preceding. Forewing with the fork of the band incomplete, the spot placed in the cell, however, is connected posteriorly with the proximally projecting tooth of the main part of the band, only separated by the median. The distal boundary of the band is not essentially constricted, and is as in *cassina cassina.* The band of the hindwing starts close to the apex as a continuous row of ochre-yellow spots, terminates at the upper median vein, there changing to deep rust-red but not diffused; it remains in its whole course approximately uniformly narrow, its posterior part is occasionally blurred. ♀ with the oblique band of the forewing bone-yellow, in the anterior part quite white. The part of the fork placed in the cell is always incomplete and indistinct. Band of the hindwing anteriorly ochre-yellow near the distal margin, changing at the upper median vein into a deep rust-red or red-brown colour; in the hinder angle this spreads out anteriorly as far as the cell. — **notandus** *Stich.* Similar to the preceding subspecies, mostly still larger and more brightly *notandus.* coloured. ♂: main part of the band of the forewing somewhat narrowed distally to the cell, broken, with long teeth on the veins. Hindwing less relieved with reddish at the costal margin, a stripe before the entire length of the subcostal always brown. The band towards the distal margin rather broad, anteriorly paler, posteriorly bright red-brown. ♀: resembling that of *aequatorialis*, the fork in the band of the forewing somewhat narrower, the branch placed in the cell broader and more complete, the distal boundary of the main part more distinctly notched at the veins, the band on the whole somewhat broader, so that the angle at the origin of the upper median vein is entirely filled up (as far as available material indicates). Peru. For the sake of clearness I here recapitulate the range of these three difficult species, which occur together in the following forms:

	O. quiteria Cr.	*O. invirae Hbn.*	*O. cassina Fldr.*
in Honduras	quirinus	relucens	fabricii
,, Costa Rica	quirinus	cuspidatus	chiriquensis
,, Colombia	badius	sticheli	numatius
,, Amazons	obidonus mylasa	intermedius	merianae
,, Guiana	quiteria	invirae	merianae
,, Central Brazil	philon	pseudophilon	—
,, South Brazil	meridionalis	remoliatus	—
,, Paraguay	oresbios	amplificatus	—
,, Peru	quirinalis	agasthenes	notandus
,, Bolivia	bolivianus	isagoras	—

Group **Catoblepia** *Stich.*

Differs from *Opsiphanes* chiefly in the secondary sexual characters, the only important structural difference being the narrower cell of the hindwing. A few other details have no generic value, and the group is connected on the one hand with *Opsiphanes* by *O. versitincta Stich.* and on the other with the group *Selenophanes Stgr.* by *O. amphirhoë*. Submedian mostly with felted hairs proximally. Costal and subcostal distinctly though narrowly separated. Subcostal 5-branched, two branches arising shortly before the end of the cell, the first in one case (*O. amphirhoë*) somewhat further proximad, running into the costal margin, the third branch midway between the end of the cell and the apex, the fifth branch forked with the fourth and running into the distal margin. Cell broad, anterior angle rounded, upper discocellular moderately long, continued by the middle one in a gentle curve proximally, the lower oblique, elongate. Median shortly inflated at the base. Hindwing nearly oval, apex rounded. Costal close to and parallel with the costa. Precostal cell broader than long, rhomboid or transverse rhomboidal. Cell narrow, about half the length of the wing. Membrane at the side of the lower median in the ♂ more or less wrinkled close to the cell, the lower median in one case (*O. amphirhoë*) strongly inflated. Cell with a hair-pencil in the posterior part or a hair-tuft in the anterior part behind the subcostal. In all cases at the submedian on a smooth friction-area a smaller hair-pencil, sometimes a brush-like tuft of hairs in or on a fold between submedian and lower median, or with a stripe of long, smooth, distally directed hairs on a mealy area between these veins. Abdomen short and slender, in one case (*O. amphirhoë*) more robust, with a swollen friction-patch at each side.

a) **Section Diophthalmi.**

Underside of the hindwing with two ocelli.

a) ♂ with a hair-pencil before the apex of the cell on the hindwing.

versitincta. **O. versitincta** *Stich.* (66 a) stands in the closest relationship to the species of the group *Opsiphanes* on account of the broad cell of the hindwing. ♂: body above brown, collar and frons red-brown, palpus yellow-brown. Ground-colour of the wings dark brown. Forewing with a deep ochre-yellow postdiscal band, in the apex three small obscure white dots. Hindwing unicolorous. In the cell, close to the median, a long hair-pencil, a brush-like tuft of hairs projecting from a fold before the submedian, a small hair-pencil on a scaleless friction-patch behind it. Under surface brown, forewing in the distal half striated with whitish, the band of the upper surface vaguely indicated by a lighter tone of colour. Between the radials a black, yellow-ringed, apical eye-spot with white pupil. Near the distal margin and parallel with it two black, slightly dentate submarginal lines, somewhat incurved below the eye-spot, the proximal one slightly bordered with orange-yellow for its whole length. In the cell three ill-defined undulate transverse lines. Hindwing striated with white with the exception of the grey-brown distal margin. Length of the forewing 43 mm. ♀: larger, brown, shot with delicate violet except at the apex of the forewing, most strongly at the base. Band of the forewing broader, lighter, proximally running through the end of the cell, at the anal angle somewhat pointed. In the black-brown apex three small white spots. Under surface as in the ♂, but lighter and with a yellowish tone. Length of the forewing 49 mm. Only 1 ♂ and 2 ♀♀ from Surinam and 1 ♀ from Cayenne known.

b) ♂ with a hair-pencil in the cell of the hindwing.

O. xanthus bears especially conspicuous hair-brushes at the submedian and a tuft of very long hairs in the cell of the hindwing. Three well differentiated local races, of which the most southerly *xanthus.* in particular is characterized by its size and by steel-blue sheen on the hindwing. — **xanthus** *L.* (63 b).

♂. Dark brown, very slightly tinged with reddish. Band of the forewing anteriorly only cut by the veins, but mostly from the bend onwards partially broken up into loosely connected spots. A more marked interruption occurs in particular at the middle median vein, whilst the posterior part is again connected proximally. At the proximal side there is a sharp and distinct angle in the upper median cellule, distally the band projects somewhat towards the distal margin in a rounded curve and in this spot-like part is placed a small whitish dot; the band terminates in a point in the hinder angle. Hindwing at the distal margin narrowly edged with reddish ochre-yellow from the apex to about the upper median vein. ♀. On the whole paler. Band of the forewing as a rule interrupted at the lower radial, so that it is split up into a short oblique band running distally to the cell and a row of 3 or 4 spots near the distal margin. The first of these spots, in the upper median interspace, is indistinct and anteriorly partly replaced by a whitish brown patch behind the eye-spot, which shows through from beneath; a less distinct light shade is observable in the following spot in the band. Hindwing as a rule lighter and more distinctly margined with yellowish. French and Dutch Guiana. — **soranus** *Westw.*, known from Pará and in my collection from Obidas on the Lower Amazon in 2 pairs found by J. Michaelis in August and September, differs from *xanthus* in the broader red-brown band of the forewing and the lighter grey under surface of both wings. — **dohrni** *Stich.* (63 b). ♂ similar to the preceding, somewhat larger, apex of the forewing rounded, little produced, upper surface brown-violet, hindwing and subapical part of the forewing showing, when viewed obliquely, a beautiful violet gloss. Forewing with angled rust-yellow macular band, beginning at the costa, beyond the cell, running obliquely to the upper median, then near the distal margin in the direction of the inner angle, touching the latter. In the apex three obliquely placed white spots and between the radials, in continuation of the row of spots before the distal margin anteriorly, a black eye-spot showing through from beneath. Hindwing unicolorous, at the distal margin duller brown, without marginal band. Beneath likewise similar to *xanthus*, yellow-brown, striated with whitish. Forewing with unicolorous border, in which run 2 moderately undulate submarginal lines parallel with the distal margin. Between the radials a black, yellow-ringed apical eye-spot divided by a white streak, before this 3 small white apical spots as above. In the cell an irregular, black-margined, darker transverse band and similar contiguous spots in the distal part. Hindwing with two ocelli, one beyond the middle of the costa, extending across the subcostal, yellowish, black-edged, proximally with white curved streak; the other in the anal area between the lower and middle medians, likewise yellowish, bordered with black, proximally with a white curved streak, the whole ringed with yellow and reddish. Distally to the precostal cell, adjoining it, a semicircular dark stripe, an angled streak between this and the anterior ocellus. Before the unicolorous distal margin a row of crescents marked by weaker and stronger striation, tending to form two arcuate submarginal lines. Coca, Ecuador to the east of the Andes at about 260 m. (type). Pozuzo, Peru, in coll. Fruhstorfer. The rare ♀ was found by Fassl also at Villa Vicencio, East Colombia, at about 400 m. above sea-level. It scarcely differs from the ♂, but has the wings somewhat more compact, the patches on the forewing more rounded and a narrow but distinct red-orange terminal border on the hindwing. The whole upper surface paler, yet appreciably blue-violet and in contrast to the ♂ glossy on the forewing also. Under surface paler, more extended grey-white.

soranus.

dohrni.

O. orgetorix is a very distinct species, formerly only known from Central America, but recently discovered also in Ecuador in a distinct race, so that there are 2 geographical forms to describe: **orgetorix** *Hew.* (64 a ♂), chiefly found at the Volcan de Chiriqui. ♂. Band of the forewing broad and pure reddish ochre-yellow, at the costal margin whitish, starting narrowly there, behind the subcostal much widened, running obliquely to the upper median vein, there somewhat angled and more vertical posteriorly. In the lower median interspace there is sometimes further a small brown spot. Both margins of the band, but especially the distal, ill-defined, more or less broken or notched. Proximally the angulation is rather distinct, distally less noticeable. The band gradually narrows and in the hinder angle forms a sharp curved point placed close to the margin of the wing. The eye-spot near the apex shows through from beneath and is mostly more or less pupilled with white, the distal border of the wing only indistinctly and slightly lighter. Hindwing at the distal margin with a reddish ochre-yellow band 5—6 mm. in breadth, narrow and paler-coloured at its commencement at the costal margin and ill-defined proximally. In the hinder angle it becomes narrow and duller and is lost in the ground-colour. Fringes brown. ♀. Forewing tinged with violet excepting the duller brown basal area, and with whitish violet transverse band distally to the cell. This band starts at the costal margin not far from the end of the cell and is intersected by the brown veins; it is white in its anterior part, separated into spots, then running obliquely towards the upper median vein, touching the lower angle of the cell, where it is obtusely angled, runs somewhat in a proximal direction as far as the middle median, then obliquely towards the hinder angle and terminates broadly at the hindmargin. Its distal edge is rather sharply defined, its proximal on the contrary indefinite. Distal margin somewhat more distinctly edged with rust-brown than in the ♂. Hindwing with gold-yellow marginal band similar to that in the ♂, but much broader, up to 13 mm., likewise narrowed posteriorly, in the hinder angle vaguely dusted with rust-red. Panama, Nicaragua. — **magnalis** *Stich.* inhabits Ecuador. The ♂ larger than in the preceding subspecies, forewing more rounded, apex less produced. Band of the forewing narrowed and darkened, sometimes dusted throughout with smoke-brown. The

orgetorix.

magnalis.

reduction in width is from the proximal side, so that the band appears to be placed nearer to the apex and its angulation is more pronounced. Its general course anteriorly is oblique from the costal margin towards the subapical eye-spot, which shows through from beneath, and from there in an obtuse angle towards the hinder angle. The distal border itself is distinctly lighter, so that between it and the band only a narrow stripe of the ground-colour remains, and this quite ceases posteriorly, the light shade of the band and that of the border here running into one another. Distal border of the hindwing narrower and duller, sometimes very little lighter than the ground-colour. In single cases the marginal band stands out somewhat more distinctly, its bordering being then strongly dentate. ♀ with broader, dull violet transverse band, less angled at the cell, anteriorly indistinct and distally strongly notched at the veins in the vaguely dusted bordering. The eye-spot in the apical part standing out very distinctly on the pale blackish ground-colour, distal margin more broadly bordered with lighter smoke-brown. This border is strongly dentate and rather distinctly defined, on the hindwing narrower and paler, light bone-coloured.

rivalis. **O. rivalis** *Niep.* is said to be very similar to *xanthus L.*, agreeing in habitus with *xanthus dohrni Stich.* Wings somewhat narrower than in *dohrni.* Apex of the forewing almost pointed (?), distal margin more sinuate. Upper surface velvety chocolate-brown. Forewing with three apical patches, after these a black ocellus showing through from beneath, then posteriorly between the lower radial and the upper median a whitish yellow spot. The submarginal macular band not obtusely angled but gently curved. It consists of 7 spots of unequal size and of dark rust-yellow colour, mostly pointed proximally. The hair-pencil in the cell light brown, that at the submedian velvety black. Under surface as in *dohrni*, the yellow-brown colour more intensive, the white striation more pronounced, the black markings stronger. The posterior ocellus is said to be pear-shaped. Length of the forewing 54—55 mm. Maccas, Ecuador.

xanthicles. **O. xanthicles**, as its name already suggests, bears a certain similarity to *O. xanthus L.*, but the hair-brush at the submedian of the forewing is less broadly attached and more bushy, pencil-like. **xanthicles** *Godm.* ♂. Dark brown, the band of the forewing runs from the costal margin at some distance distally to the end of the cell and parallel with the discocellulars obliquely to the upper median vein, is behind this bent round posteriorly in an obtuse angle and gradually tapers to a point towards the hinder angle. The proximal boundary is rather sharp and in places only a little notched, the obtuse angle somewhat rounded, the distal boundary projecting at the lower radial, the angulation sharper, otherwise running in a fairly uniform direction. Hindwing with several small, dull ochre-yellow apical spots or the rudiments of a marginal band at the apex. ♀. Ground-colour of the upper surface pale grey-brown, the apical area darker. Band of the forewing broader, pale ochreous. The widening occurs chiefly at the proximal side, so that the band is placed nearer to the cell and the obtuse angle is lost. The boundary-line forms here only a slight curve, whilst distally it shows exactly the same characters as in the ♂. Hindwing with more distinct, pale ochre-yellow marginal band, which, however, just behind the apex is somewhat removed from the distal margin and vaguely diffused. Panama. — *cyparissa.* **cyparissa** *Fruhst.* (66 a). Ground-colour black-brown, forewing with the usual 3 white apical dots and with a dark ochre-yellow band traversing the wing from the costal margin (at a distance of about 7—9 mm.) distally to the cell and about the upper median approaching the distal margin, which it nowhere quite reaches. Towards the submedian the band is narrowed. On the hindwing it is continued as a moderately broad distal border, extending from the subcostal to the middle median and gradually narrowed posteriorly. Before the upper wall of the cell a long black hair-pencil (in *xanthus* this pencil is light yellow, in *berecynthia* black and small, in *amphirhoë* and *orgetorix* it is entirely absent), a still longer, thicker hair-pencil, distally strongly wavy, arising from a fold before the submedian, and the usual small grey scent-tuft in the bare scent-cavity proximally to the submedian. Under surface: basal half of the forewing dark brown, the submarginal area striated with white, the distal border anteriorly brown, posteriorly yellowish. From the black-pupilled apical ocellus onwards a narrow, sharply pronounced violet-white submarginal band traverses the wing. Hindwing with a broad, oblique brown median band, crossing the lower part of the cell. Round the large brown-ringed anal ocellus a broad, somewhat coffee-brown patch; otherwise with dense, fine white striation throughout with the exception of the greenish brown distal border. Two black undulate antemarginal lines extend on the hindwing from subcostal to submedian, on the forewing they become indistinct before the middle median. ♀ uniformly black-brown, the white apical patches somewhat larger than in the ♂. Band of the forewing nearly twice as broad, only moderately narrowed costally and anally, between the lower radial and the upper median enclosing a white dot in the distal part. Marginal band of the forewing compact, ochre-yellow, proximally with reddish gloss, sharply defined as far as the inner marginal vein. Under surface more copiously striated with white than in the ♂. Terminal border with brighter yellow-brown edging. Muzo, Colombia, 4—800 m., ♀ *belisar.* discovered by Fassl. — **belisar** *Stich.* Larger than the typical subspecies, of a darker ground-colour. Band of the forewing somewhat broader, bright reddish brown; proximal boundary-line without distinct angulation, arcuate, distal boundary as in the typical subspecies. Hindwing with a bright reddish ochre-yellow marginal band 5—7 mm. in breadth at the distal margin, starting in a point at the apex, soon developing into the full band and remaining distinct nearly to the hinder angle, where it is lost in the ground-colour in a vague dusting; its proximal boundary is somewhat curved. Otherwise like the typical subspecies. Length of the forewing 54 mm. Bolivia (province of Yungas, La Paz).

singularis.

O. singularis *Weym.* ♂ above dark brown, in the end of the cell and behind it somewhat reddish. Apical area black-brown. In the distal part of the cell an irregular, deep ochre-yellow spot. Beyond the cell runs an ochre-yellow transverse band, curved somewhat basewards in the anterior part; it consists of 6 spots, of which the first three are more closely, the posterior ones loosely connected; at the upper median vein a rounded wedge of the ground-colour projects from the cell into the band, making a deep excavation in it. Near the apex is placed a comparatively large, rounded, light ochre-yellow spot. Hindwing nearly oval, from the base onwards brown; beyond the cell this colour gradually changes into rust-red and finally into an undecided deep ochre-yellow marginal band; before the subcostal, distally to and near the precostal cell, is placed an anteriorly directed ochre-yellow hair-tuft, in the posterior part of the cell and between this and the submedian strong brown hair not arranged in pencils or tufts; and on a bare friction-patch at the hindmargin, about in the middle of the submedian, a very small hair-pencil. Under surface of the forewing brown, variously clouded and shaded with lighter and darker. In and at the end of the cell confused black lines, which enclose and cover two band-like brown areas; between these some whitish dusting. In the lower radial cellule there is a black eye-shaped spot. Distal margin grey-brown; near it run two black lines, both lost near the hinder angle in the ground-colour, which is there grey-yellow. The apex is somewhat ochre-yellow, the hindmarginal area smoke-brown. On the submedian, near the base of the wing and covered by the anterior part of the hindwing, is placed a small, oblong ochreous scent-scale spot. Hindwing light brown, the proximal costal area before the costal somewhat darker, with transverse white striation, the part of the wing behind this area as far as the median covered with irregular dark figures; distally hereto there is a large, roundish, eye-like spot of various shades of brown, ringed with black-brown. In the posterior part of the wing there is a second black eye-spot, placed in a light brown ring, its inner disc dusted with yellowish and bearing a white streak; the whole is ringed with black-brown and stands in a brown-violet area. The rest of the wing striated and marbled with black-brown, the distal area more uniform brown, while the central part has a slight violet sheen; the striation is sharpest in the hindmarginal area. Length of the forewing 44 mm. Guatemala, only 1 ♂ known.

amphirhoë.

placita.

O. amphirhoë represents the *Catoblepia* group in central and southern Brazil. The species may be easily known by its characteristic light grey marbled under surface, on which the apical eye-spots are displaced far towards the distal margin. Two well differentiated local forms: **amphirhoë** *Hbn.*, name-type probably from Rio de Janeiro, where according to Bönninghausen (who erroneously called it *xanthus*) the larva, which is of a sea-green colour, lives on prickly palms. Both sexes essentially larger than the figured *placita*, the ochreous band correspondingly broader. Not very rare in Espiritu Santo. — **placita** *Stich.* (64 a) is always smaller, the band of the forewing always continuous, not broken up in the anterior intramedian area, as in *amphirhoë*. Under surface much darker. Forewing only with grey patches in the cell. Hindwing with more pronounced black clusters of scales, which are condensed and developed into a kind of submarginal band. Apparently common at Blumenau in Santa Catharina (8 ♂♂, 2 ♀♀ in coll. Fruhstorfer); very rare in Rio Grande do Sul, whence I only have 2 ♂♂ from Candelaria. According to Stichel an intermediate form seems to occur in São Paulo, details of which are not yet known. There is still much to be desired as regards the exploration of Brazil, which will provide one of the most remunerative tasks for the future.

b. Section Polyophthalmi.

Under surface of the hindwing with a curved row of 5 or 6 ocelli. ♂ above always with a hair-pencil in the posterior part of the cell, a smaller one behind the submedian and a brush-like tuft between this and the lower median.

berecynthia.

latitaenia.

velata.

O. berecynthia somewhat resembles *O. xanthus L.*, except that the wings are more rounded and the scent-hairs at the submedian are drawn out into a pencil instead of attached as a broad brush. Several geographical races, some of them very sharply differentiated. **berecynthia** *Cr.* Band of the forewing varying in breadth, in quite typical specimens only narrow. It runs obliquely, without touching the cell, from the costal margin to the upper median vein, is then angularly curved posteriorly, gradually approaches the distal margin, is narrowed and terminates in a sharp point not far from the anal angle. Its proximal boundary is fairly smooth, only at the middle median vein somewhat notched, its distal margin less sharply defined, more or less incised at the veins. Hindwing with complete but narrow, or partially indistinct, rust-red band at or near the distal margin, in the former case as a rule only posteriorly touching the margin, anteriorly somewhat removed from it. On the underside of the forewing the proximal of the submarginal lines only weakly curved, the distal one placed rather near the margin. ♀ paler, band of the forewing broader, its proximal boundary touching the discocellulars, at the posterior angle of the cell, between the middle and upper median veins, projecting basewards in a tooth, the angulation less sharp, but quite appreciable at the distal boundary. Hindwing at the distal margin with complete rust-red band, which in the anterior part is somewhat removed from the margin. Under surface less bright, the lines near the distal margin of the forewing more strongly curved. Two known aberrations in the form of the band: **latitaenia** *Fruhst.* (64 a). Band of the forewing widened and strongly angled, the yellowish distal margin of the hindwing dull. **velata** *Stich.* Band of the forewing narrowed and darkened, partially, occasionally even entirely, blurred and indistinct. In the ♀ the difference is less striking, but the band is paler in colour, occasionally likewise washed-out and somewhat darkened, always narrower than in the type-form; it remains as a rule somewhat removed from the end of the cell, more rarely slightly touching it at the origin of the lower radial. Hindwing in the ♂ unicolorous or only with indistinct or clouded remains of the marginal band; in the ♀ the posterior part of this band is present, but dull, anteriorly it is obsolete *midas.* or transformed into small dull spots. Guiana and Lower Amazon. — **midas** *Stich.* Type from Coca in East Ecuador. ♂: ground-colour dark black-brown. Band of the forewing less sharply bent than in the typical subspecies, forming at the proximal boundary only a slight curve, at the distal an obtuse angle in the upper median cellule. Proximally it is but little incised at the veins, at the middle median occasionally somewhat more strongly, distally it is more broken and less sharply defined. In the hindwing there is a narrow rust-yellow distal band, which starts posteriorly in a point, in the hinder angle immediately adjoins the distal margin, and is there broadest, about 4—5 mm., is then removed to about the same distance from the margin, *luxuriosa.* narrowed and broken up into spots. — **luxuriosa** *Stich.* ♂: differing from the preceding in having the band of the hindwing only present as a broad rust-yellow spot in the anal angle, about from the submedian to the upper median. The distal margin otherwise unicolorous. Band of the forewing broad, the distal boundary somewhat dentate and angled, the proximal likewise incised at the veins, filling the upper part of the cell. Ocelli on the underside of the hindwing large and brightly marked. Each surrounded by a broad rust-yellow patch, the patches connected so as to form a sinuous undulate band, in which the ocelli are placed. Length of the forewing 49—50 mm. ♀ larger than the ♂, ground-colour lighter. Band of the forewing extending considerably into the distal part of the cell, so much so indeed, that the latter is filled up with rust-yellow from the upper angle *viccnciona.* to the origin of the middle median. Length of the forewing 54 mm. Colombia (Muzo ?). — **vicenciona** *subsp. nov.* somewhat resembles *unditaenia* above in the band of the hindwing, on the other hand that of the forewing, as in *luxuriosa Stich.*, touches the apex of the cell, but is distally even somewhat more broken and anally narrowed. Before the cell-wall, just at the origin of the lower radial, stands a circular spot, which is not broadly diffuse as in *luxuriosa.* Subterminal band of the hindwing deeper reddish yellow than in *unditaenia,* anteriorly not broken up into separate spots and anally extending to the distal margin, thus somewhat widened. Under surface: cells red-brown, but the apical part and the whole submarginal area of the forewing grey-violet, hindwing with four green-pupilled posterior eye-spots and two anterior ones filled up with reddish. East Colombia, Villa- *adjecta.* vicencio, 400 m. (Fassl leg.). — **adjecta** *Stich.* ♂ above deep black-brown. The band of the forewing proximally touches the discocellulars and is gently bent, not angled as in the typical subspecies, also somewhat broader on an average. Distal marginal band of the hindwing towards the hinder angle considerably widened, anteriorly narrower, at the apex tapering to a point and in the anterior half somewhat removed from the margin. The bands of both wings bright reddish ochreous. Under surface, as in the following subspecies, brightly coloured, the distal eye-spots occasionally developed into a complete chain across the entire breadth of the wing. Bo- *berecynthina.* livia, Amazons (in transitions). — **berecynthina** *Hopff.* (= vercingetorix *Stgr.*). ♂: band of the forewing proximally widened in such a way that the angle is completely filled in and the boundary-line runs in a curve. The proximal boundary occasionally crosses the distal part of the cell, the discocellular, however, remaining brown. In this case its margin is incised at the median and anteriorly in the cell vaguely dusted. At the distal boundary the angle in the upper median cellule is, however, more distinct. The posterior part and the point at the extremity are much broader than in the typical subspecies. Hindwing at the distal margin with an entire-margined band, which starts in a point at the hindmargin, quite near the hinder angle, soon widens to a breadth of 8—9 mm., anteriorly is gradually narrowed again and somewhat removed from the margin, and terminates almost in a point in the apical area. In transitional specimens the band is narrower in the posterior part, the narrowing less gradual and the anterior part more or less broken up into spots. ♀: the band of the forewing crosses the distal part of the cell, at least its posterior angle; band of the hindwing similar to that of the ♂, but still broader, up to 12 mm. The bands of both wings paler in colour than in the ♂, the brown ground-colour also less deep, the eye-spot of the under surface between the radials of the forewing showing through *unditaenia.* strongly above as a filled-up black circle. Peru, Bolivia. — **unditaenia** *Fruhst.* (64 a) was already known to Hübner and figured by him as *berecynthia.* But Hübner's and our figures differ considerably from Cramer's name-type: 1) in having the band of the forewing not elbowed or angled, but forming a neat curve; 2) in the broader and more intensively red-yellow bands of both wings; 3) in the brighter red-brown under surface. These three differences at once characterize the new local form which has not hitherto been noticed and in which the bands are almost as much widened as in the typical *berecynthia Cr.* ♀♀, but brighter coloured and more sharply defined. I have seen no examples in which the black border occupies the entire distal margin, as in Hübner's figure. In my Rio ♂♂ this border only reaches to the upper median; this and some other variations are naturally unimportant and mostly individual. In respect of the tertiary sexual characters, *unditaenia* differs from the type in four modifications: 1) the much longer and denser hair-tuft at the inner margin of the forewing; 2) the scent-pencil at the upper cell-wall of the hindwing much stronger and completely covered by this hair-tuft; 3) the entirely black hair-pencil (in *berecynthia* basally yellow); 4) the longer hair-tuft in the shiny scent-cavity of the submedian. Coll. Fruhstorfer, type 1 ♂ from Rio de Janeiro, according to Stichel 1 example from São Paulo in coll. Staudinger.

generosa. **O. generosa** *Stich.* ♂. Nearest to *O. berecynthia Cr.* Larger, stumpier, forewing with rounder apex. Ground-colour black-brown. Forewing with three small white apical spots and a broad, elongate, oblique gold-yellow discal band, of which the distal boundary runs near the cell, outside it, and the proximal boundary crosses it, so that fully one-third of the cell is filled up with gold-yellow. The margins of the band, especially the distal, not appreciably dentate. Beneath the ground-colour beyond the cell is yellowish, strigulated and clouded with black-brown, gradually becoming duller, particularly in the anterior part. Near the apex there is some whitish striation and the three small white spots of the upperside. Between the radials is placed a round, black, yellow-ringed and blackish-bordered eye-spot, containing a white streak. Distal marginal area separated from the striated part of the wing by a concave ochre-yellow stripe, which is particularly brilliant posteriorly. Hindwing above unicolorous brown with the exception of the hinder angle, which is golden yellow, and from which the beginning of a band bordered with duller yellow can be traced near the margin almost to the upper median vein. Sexual characters as in the preceding species, but the tuft before the median and the small pencil on the bare friction-patch at the submedian are wanting. Under surface yellow-brown, with two blackish lines in a narrow distal marginal area. The rest of the wings striated and clouded with brown; adjoining the precostal cell a yellow-red, dark-margined spot, two similar, less distinct spots in the cell. Distally to these an undulated row of 6 more or less distinctly ocellated, round spots, the posterior 4 or 5 connected into a sort of chain by a light bordering. The first spot, placed behind the middle of the costal margin, red-yellow bordered with black, enclosing a white curved streak, the following two with indistinct pupils, the rest with large black pupils, which are almost entirely dusted over with greenish yellow and anteriorly also more or less distinctly edged by a white curved streak. Between this chain of spots and the distal marginal lines whitish striation, which stands out from the reddish ochre-yellow ground-colour in loosely connected lunules or pointed marks. Eastern Ecuador, Peru (Pebas).

Group **Selenophanes** *Stgr.*

Upper and middle discocellulars sharply right-angled. Costal and subcostal narrowly but distinctly separated. The latter 5-branched. Two branches before the end of the cell, the first at some distance proximally, the second just before the cell, the third branch arising midway between cell and apex, all three into the costal margin, the fourth arising shortly before the apex, running into it, followed by and forked with the fifth. Cell long, only moderately broad, distally rectangular at both sides. Anterior discocellular very short, middle arising at an acute angle from this, shortly curved and then continued without a break by the somewhat longer posterior discocellular. Median in the ♂ inflated near to the base. One species (*O. cassiope Cr.*) beneath before the submedian with a raised, mealy scent-spot, to which corresponds a mealy friction-patch between the costal and subcostal on the upperside of the hindwing. Hindwing with the apex rounded and the anal angle mostly rather pointed, only in one species (*O. josephus Godm. & Salv.*) rounded; ♂ without manifest hair-pencils or brushes, but between submedian and median with long hairs, in two species (*O. supremus Stich.* and *josephus Godm. & Salv.*) above the subcostal, close to the precostal cell, an anteriorly directed hair-tuft, covered by the hindmargin of the forewing, one species (*O. josephus*) with an almost triangular pilose black scent-spot between the posterior and middle medians. Precostal cell very narrow, precostal vein extending considerably beyond it. Costa proximally strongly lobed. Cell narrow and long, more than half the length of the wing. Abdomen without lateral friction-glands or protuberances.

a) Forewing of the ♂ beneath with pilose scent-spot before the submedian. Hindwing with mealy friction-patch before the subcostal or erect hair-tuft close to the precostal cell.

cassiope. **O. cassiope** *Cr.* Dark brown, at the costal margin near the apex almost black. Oblique band of the forewing anteriorly pale, then light reddish ochreous; it runs from the costal margin obliquely to the hinder angle, where it forms on the submedian a blunt point bent towards the hindmargin. Breadth of the band about 8—10 mm. Hindwing unicolorous, sometimes with a somewhat obscure yellowish brown band near the distal margin or immediately at it. Mealy spot in the costal area grey-black. ♀: larger; mostly duller, with the band of the forewing somewhat paler. The latter, however, considerably broader, up to 12 mm., posteriorly more obtuse, distally more dusted and broken, but, as in the ♂, running for its whole length outside the cell, although with its proximal boundary touching the discocellulars. Distal margin below the apex narrowly dusted with more or less bright yellowish, this dusting sometimes developed into a sharply defined band as far as the middle median and then gradually shading into the brown ground-colour. Hindwing usually unicolorous with dull brownish yellow distal-marginal dusting behind the apex. This dusting as in the forewing occasionally consolidated into a band, but before the hinder angle gradually becoming duller and more indefinite; sometimes there is also a more or less distinct undulate band near the distal margin, about from the subcostal to the upper or middle median vein (transitions to *amplior* and *cassiopeia*). Guiana, northern Brazil (Lower Amazon). — **cassiopeia** *Stgr.*, from the Upper Amazon and Peru. ♂: band of the forewing as a rule not *cassiopeia.* so broad as in the preceding subspecies, proximally likewise filling up about one third of the cell, distally more regularly oblique. Its proximal bordering more strongly broken, especially deeply incised at the median and in the lower median cellule, the distal boundary also sometimes more broken up. ♀: band of the forewing of uniform breadth, a very large quadrate spot before the apex of the cell. Hindwing with distinct yellowish grey marginal band, deeply incised proximally, and a narrow reddish yellow submarginal band, which disappears at the middle median. Under surface darker than on Staudinger's figure of the ♂ in Exot. Tagf. pl. 71. Hind-

amplior. wing only towards the costa slightly lighter. Villavicencio, East Colombia, 400 m. — **amplior** *Stich.* An intermediate form between *cassiope* and *cassiopeia.* Smaller than the latter. Band of the forewing broader, bright orange-yellow, margins less dentate. Submarginal band of the hindwing narrower than in the preceding, but distinct, undulate (crescentic), present from the costa to the lower median, then obsolete, shading into the ground-colour. Length of the forewing 54 mm. 1 ♂, from Colombia. This form also occurs on the Lower *theognis.* Amazon as an aberration together with the type-form. 1 ♂ in coll. Fruhstorfer from Obidos. — **theognis** *Fruhst.*, from Matto Grosso, is a further intermediate form connecting *cassiope, cassiopeia* and *placentia* and differing from all three in having the band on the forewing brighter red-yellow but much narrower. The hindwing has a grey-brown distal border composed of crescentic patches filled in with deep black, and a distinct longitudinal line, anteriorly somewhat ochreous, anally red-brown. Under surface lightened as in *cassiopeia.* *placentia.* — **placentia** *subsp. nov.* ♂: intermediate between *theognis* and *cassiopeia Stgr.*, but approximating more to the neighbouring race from Brazil. Band of the forewing more regular, broader and of lighter yellowish ground-colour. Hindwing with the markings more washed-out, the black submarginal band in particular more broken up, the yellowish postdiscal band anally lighter. Under surface with more extended dark shading in the distal area, with more prominent black lines. Coroico, Bolivia, 1200 m.

andromeda. **O. andromeda** *Stich.* Bolivia. A handsome species. Oblique band of the forewing broader than in *cassiope*, fiery rust-yellow, at both sides darker and with dashes projecting into the ground-colour. Distal margin of the hindwing broad, over ½ of the latter fiery rust-yellow, proximally darker, gradually shading into the ground-colour. Next to the distal border a submarginal black undulate line. Ground-colour of the under surface reddish brown, less whitish than the Amazon form and *placentia Fruhst.*

O. supremus differs from *cassiope* in the straighter course of the band of the forewing. Two very *supremus.* rare subspecies: **supremus** *Stich.* Apex of the forewing moderately produced, distal margin correspondingly shallowly excised. The zigzag band of the forewing in the middle about 8 mm. in breadth, anteriorly smooth-margined, posteriorly rather sharply dentate; it forms in its general course two curved sections, an anterior one from the costal margin to the middle median vein and a somewhat shallower one from there to the hindmargin. On the middle median it projects in a long pointed tooth proximally towards the cell. Band of the hindwing present near the distal margin and in the middle part, from the upper radial to the upper median, as two connected, pointed curved spots. Before and behind this only some dull brownish dusting is visible, indicating the continuation of the band. The middle part of the band is likewise ill-defined and slightly darkened. *ditatus.* Ecuador. — **ditatus** *Thieme* is somewhat larger, apex of the forewing a trifle more produced, distal margin somewhat more deeply concave. Band of the forewing a little narrower, on the other hand the bright rust-yellow band near the distal margin of the hindwing broader, more sharply expressed and completely formed almost to the hindmargin. It is likewise composed of pointed curved spots, its margin projecting distally in pointed curves in the interneural spaces, and being proximally hollowed out at the same places and on the veins produced into points. Distal margin of the hindwing tinged with yellowish brown, lighter and more decided than in the typical subspecies. Southern Peru and Central Peru (Huancabamba, 1500 m.).

O. josephus bears a nearly triangular black scent-spot between the lower and middle medians on the forewing above. The ocelli of the under surface, in contrast to those of *O. cassiope,* are oval or rounded instead *josephus.* of reniform or falcate. Only a few examples are known, which divide into two local forms: — **josephus** *Godm. and Salv.* Apex of the forewing in the ♂ pointed, almost falcate. Transverse band ochre-yellow, posteriorly more reddish, its inner margin jagged, especially in the anal part of the wing. Before the apex 3 small white spots. Beneath the lines before the distal margin are less undulate and diverge but little in the middle. Gua- *excultus.* temala. — **excultus** *Stich.* (66 a). Apex of the forewing somewhat more obtuse. Band broader, deeper reddish ochre-yellow, its proximal margin less incised and broken; it is of a whitish yellow tone at its commencement on the costal margin, and 7—8 mm. in breadth; runs obliquely to the anterior median vein, touching the discocellulars; is distally dentate before this vein, proximally somewhat retracted behind the cell, and from here directed somewhat more vertically towards the hindmargin. Its inner margin is somewhat sharply broken at the middle median vein, in the interneural spaces slightly incised, its outer margin notched at the two anterior median veins, afterwards entire. The band terminates in a basally directed point in the anal angle. Hindwing unicolorous, or with a narrow, curved, obscure rust-red band before the distal margin. The lines near the distal margin on the underside of the forewing in the middle somewhat more divergent and more strongly dentate, underside of the hindwing deeper brown. Colombia.

lutescentefasciatus. **O. lutescentefasciatus** *Kirby* is a doubtful species of the subgenus *Opsiphanes*, and is only mentioned here because Kirby has given it in his "Catalogue". In shape and size similar to *O. cassina cassina* ♀; upper surface brown, above and beneath a broad yellowish median band running parallel with the distal margin. Under surface reddish, the band deep yellow.

6. Genus: **Eryphanis** *Bdv.*

The species united here were formerly referred to *Caligo*, until Boisduval separated them in 1874 as a distinct genus, although the differences in neuration are of little importance, the divergance consisting rather in the different form of the ♂ sexual characters. *Eryphanis* differs superficially from *Caligo* in the weaker build of the body and mostly in the fiery colouring of its species. In the neuration of the forewing the middle discocellular and the lower are not so long as in *Caligo*, not so transversely placed, but obliquely joining the median at its 3rd branch. This same is the case with the cell of the hindwing, but the precostal cell is quite as small as in *Caligo*. The ♂♂ possess at the inner margin of the hindwing a strikingly large elongate or rounded, yellowish pilose spot, consisting of long, spatulate scent-scales. In addition they have, like *Caligo*, a shiny area, of lackered appearance, at the submedian, corresponding with a gland on the abdomen; the hair-pencil is wanting. The clasping-organs show more analogy with *Opsiphanes* than with *Caligo*, to which the genus is otherwise apparently nearer. Tegumen as in *Opsiphanes* and the *Satyridae* with a hook-shaped uncus which bears two lateral, ventrally smooth points. The valves long, slender, dorsally sharply dentate. The range of this genus extends over northern South America and through Central America to Mexico. In the south, like the genus *Opsiphanes*, it does not extend beyond Rio Grande do Sul and Bolivia. — Egg the same size as those of the Morphids, spherical, somewhat flattened above and beneath and on these flattened parts dark brown, otherwise whitish grey. Round the greatest circumference runs a broad, deep dark brown stripe, which, however, at one side is not closed but remains open for about ½ mm. Larva on bamboo. It keeps the anal fork compressed, so that it looks not unlike a Sphingid horn. Pupa elongate and as pointed at the head as at the anal end. According to Dr. HAHNEL the butterflies present a magnificent show of colour when in the shade of the woods they suddenly let their wonderful deep dark blue flash out. According to my experience in Santa Catharina the *Eryphanis* are fond of feeding at the sap flowing out of trees in the undergrowth, on the stems of which they sit with the wings folded, and it is also occasionally possible to attract them with overripe bananas. They are, however, nowhere found in large numbers. — Only 6 species are yet known. They are divided into two unequal groups according to whether a brush of hairs is present on the friction-area of the hindwing.

a) ♂ without hair-pencil on the bare inner-marginal area of the hindwing.

E. polyxena, distributed in collections under the name *automedon Cr.*, inhabits the whole of South America from Venezuela to Paraguay, also Central America and Colombia to Ecuador and Peru, and splits up into five known branch-races: **lycomedon** *Fldr.* Forewing in the ♂ blue-violet in the discal part, distal margin *lycomedon.*
dirty ochre-yellow, band washed-out; hindwing dark brown with narrow yellow-brown distal margin and dull lilacine gloss; ♀ dull brown, the end of the cell darker, in the dark brown distal area a rather sharp, ochreous undulate band, anteriorly forked, but the outer branch washed-out. Disc of the forewing with a dull, grey-blue gloss; in the cell sometimes 2 diffuse spots. Disc of the hindwing with blue-green reflection. Central America and Colombia. — **polyxena** *Meerb.* (64 b ♂, c ♀ as *automedon*). Above black-brown; ♂ nearly black, *polyxena.*
discal part of both wings with beautiful blue reflections; forewing before the distal margin often with narrow yellowish band, forked towards the costa. ♀ duller, costal and apical borders yellow-brown, basal half grey-brown, distally with slight blue-green reflection. Venezuela, Trinidad, Guiana, North and Central Brazil, about as far south as to Rio de Janeiro. — **wardi** *Bdv.*, originally coming from Matto Grosso, but at first described *wardi.*
by its author himself with the erroneous locality "Guatemala", was a lost form, of which I first received authentic examples last year, from the neighbourhood of Cuyaba, Matto Grosso. *wardi* is distinguishable above from *polyxena* by a slight violet shade, somewhat agreeing with that of *lycomedon*, and the more marked, pale yellowish, but still obsolescent submarginal band connects it with *novicia* from Ecuador and *lycomedon* from Colombia. The ♀ may readily be distinguished from the Brazilian *polyxena amphimedon* by an extended, nearly light yellow subapical (transcellular) area and two isolated yellow patches before the apex of the cell of the forewing. — **amphimedon** *Fldr.* has very extended indigo-blue gloss on the upper surface, encroaching on *amphimedon.*
the obscure yellowish band before the distal margin and on the hindwing only leaving a narrow margin. Distal margin of the hindwing less strongly angled at the lower median vein; ♀ with the blue colour more extended and more brilliant. Hindwing purer blue-grey in the basal part, the latter more sharply defined. According to VON BÖNNINGHAUSEN very rare in shady places at Rio. Larva described in the generic diagnosis. From Blumenau, Santa Catharina, in my collection; according to STICHEL also in Paraguay. — **novicia** *Stich.* Some- *novicia.*
what smaller than *lycomedon.* Above darker, predominantly brown, with only a slight violet tinge in the central area of the forewing. The band near the distal margin of the latter purer. Hindwing distinctly angled, narrowly but rather sharply margined with ochre-yellow. La China, province of Los Rios (Ecuador). — **tristis** *Stgr.* The ♂ differing from the preceding subspecies in having much less blue on the hindwing. This *tristis.*
dusting is here only present near the apex as a small spot, which at an oblique angle of light occupies a larger space. Southern Peru. — **cheiremon** *subsp. nov.* closely approaches *wardi Bdv.* from Matto Grosso, as is so com- *cheiremon.*
monly the case in Bolivian subspecies, but is larger and bears a much longer yellow mealy spot in the anal fold of the hindwing. The blue of the upper surface is brighter, on the hindwing more sharply defined. The under surface more resembles that of *lycomedon Fldr.* from Colombia, but the subbasal part of the forewing and the basal area of the hindwing are silver-white instead of yellowish resp. grey-brown. Ground-colour in general also lighter, rather to be called grey than brown. Coroico, Bolivia, 1200 m. — **spintharus** *Fruhst.* A conspicuous *spintharus.*

local form from eastern Colombia, which there replaces *lycomedon Fldr.* and is much nearer to the Bolivian *cheiremon* and *wardi Bdv.* from Matto Grosso. ♂ with the submarginal band of the forewing nearly twice as broad as in *lycomedon* and grey instead of yellowish, the refletcion on the upper surface brilliant blue, not violet; ♀ differing from that of *polyxena Meerb.* in having a broader, paler yellow-grey longitudinal band on the forewing, distally enclosing two large black spots (ocelli). Apex of the cell and the whole circumcellular region pale yellow-grey. Basal part of the cell black instead of dark blue as in *automedon*. Hindwing with only a restricted glossy blue discal area. Cell grey-black, the distal border extending nearly to the cell, deep black. Under surface lighter than in *automedon*. Apex of the cell and median part of the forewing, basal and median area of the hindwing nearly whitish grey, with slight purple tinge. Upper Rio Negro. East Colombia, 800 m., discovered by FASSL.

E. reevesi divides into three branch-races in central and southern Brazil. In habitus it approaches *E. polyxena amphimedon Fldr.*, together with which it occurs. The ♂, however, is easy to distinguish from *amphimedon* by its smaller size and dark blue-violet ground-colour and the ♀ by its brighter yellow but narrower bands. *reevesi* is regarded as the commonest of the known species; it is not difficult to bait it with fruits spread out or hung up and it is found in Sta. Catharina, both in the elevated localities and in the hot valleys at the "Waldschänken", where it often drinks at one place for hours. But the scales are very loosely attached *hemichroa.* and it is difficult to obtain perfect specimens. — **hemichroa** *Btlr.*, described from Minas Geraes, probably differs somewhat from examplas from Rio de Janeiro and Espiritu Santo, and may be taken to include specimens from Bahia, which differ from more southern *reevesi* in their small size and also in the somewhat paler violet of the upper surface and the predominantly pale grey-brown under surface, which in Bahia ♂♂ appears washed-out as in the more *reevesi.* southern ♀♀ of the collective species. — **reevesi** *Westw.* extends with little variation from Espiritu Santo to Santa Catharina, where I found it from January to March in dark forests. Forewing of the ♂ dark brown, distal margin grey-yellow; distal part tinged with deep violet; this colour is anteriorly broad, extends into the posterior, projecting angle of the cell, and is narrowed towards the hindmargin; the apex remains free. Hindwing similar, but with the violet shade darker and still more ill-defined. In an oblique light the blue shows here distally and behind the cell as a vaguely defined median area, brighter on the veins than in the interspaces. Scent-spot in the anal area spongy, surrounded by a narrow, light glossy ring, placed in a distinct hollow in the membrane of the wing, visible on the under surface as a raised swelling. Length of the forewing, ♂ 53, ♀ 55 mm. — Larva (according to G. W. MÜLLER) on Olyra latifolia L. and Bambusa; it sits close and broadly appressed on the underside of the leaves. Body when young yellowish with red dorsal and lateral stripes, slender, posteriorly narrowed, with long forked tail, which in the resting posture is horizontally pressed together or separated and erected. Afterwards green-red with dark dorsal line, red, white and brown longitudinal stripes; when full-grown the dorsal area pure green, posteriorly and anteriorly narrowed, terminating in a point on the 11th segment, finely edged with brown; lateral stripes brown and white, at the posterior margin of the middle segments black warts (false spines) of considerable size. Head large, broad, elongate, anteriorly steeply sloped, approximately quadrate, with 3 pairs of short horns; at first whitish with brown stripes, afterwards dark green in the middle with white, brown-edged stripes, which viewed from above, run in the same direction as the stripes of the body. — Pupa elongate, similar to the rolled-up leaf of a Monocotyledon, with very long horns placed close together, angles indistinct, ground-colour dirty brown-yellow.

E. zolvizora is a very rare species, which is distributed from Colombia to Bolivia and of which two branch-*zolvizora.* es have been described. — **zolvizora** *Hew.*, originally from Bolivia, perhaps distributed northwards as far as Peru. Upper surface dark red-brown with a band on the forewing composed of four or five crescentic ochre-yellow spots and yellowish brown terminal border on the hindwing. Under surface brown with a broad yellowish white subbasal and an angled, similarly coloured but much narrower median band. Otherwise very similar to *reevesi*, which it replaces in Bolivia and the Andean region. Known to me from Corsico, Bolivia, 1200 m. — *opimus.* **opimus** *Stgr.* is the northern branch. In it the band of the forewing is more continuous, somewhat narrower, the longitudinal stripes on the underside somewhat extended, more yellowish, somewhat narrower. Type from Manizales, in the Cauca Valley, West Colombia, before me from the Rio Aquaca Valley, West Cordillera, Colombia, from 2000 m. In Ecuador and Peru occurs an allied race, which has not yet been sufficiently noticed, although STAUDINGER has already pointed out some slight differences. The egg is similar to that of *C. oberthueri Deyr.* in size and appearance, but with protuberances at both sides. The colour is bone-white, but in consequence of a fluid which is secreted by the ovipositor it looks as if irregularly plastered with rose-red. The rare ♀ mostly attains the size of a small *Caligo*.

seleucida. **E. seleucida** *Hew.*, another rare species, is above similar to *Caligo illioneus Cr.* Under surface remarkable for the strikingly large ocelli. ♂: above rust-brown, anteriorly in the median area somewhat lighter, distal area broadly dark brown, the margin itself narrowly dirty ochre-yellow. Near the distal margin with a narrow, undulate, ochre-yellow, slightly reddish transverse band, from which arises anteriorly, but indefinitely connected, a short, strongly curved and angled, somewhat duller coloured accessory band, which, however, like the main band, does not quite reach the costal margin. In the fork of the bands 2 black spots and at the end of the principal branch of the band 2 small white dots. Beneath the median area forms a broad band, brown, distally tinged with lighter and darker ochreous, bordered en each side by a whitish stripe and distally in addition bounded by a twice broken black-brown line. Succeeding this the distal area is in its anterior, triangular part brown striated with white, posteriorly and distally with two black, yellow-ringed eye-spots, placed one behind the other, before these another black spot and two blind eye-spots near the apex. The area distally to the cell copiously dark-striated, bounded by a dark undulate line edged with ochre-yellow or whitish. Distal area rust-brown, likewise with dark, whitish-bordered line near the wing-margin. Hindwing with pale brown hindmarginal area, a bare friction-patch with pencil-like hairing between submedian and hindmarginal vein and a large mealy scent-scale spot in the region of the hinder angle. Ground-colour otherwise dark brown, in the middle of the wing tinged with reddish, distal margin narrowly bordered with rust-brown. Under surface in the basal and distal areas brown, profusely striated with black or black-brown. Median area broadly band-like, dark brown with white bordering. The area behind the eye-spots more or less striated with whitish. In the anterior part of the median area is also placed a large dark brown eye-spot with yellowish ring and white pupil. In the distal marginal area there is an undulate line bordered with light brown. ♀ unknown. Bolivia.

b) with brush-like hair-tuft close to the submedian of the hindwing.

E. aesacus comes from Central America, extending from Mexico to Colombia and dividing into two local forms: **aesacus** *H.-Schäff.* (64 b) is the smaller subspecies. ♂: Forewing near the distal margin with faint ochre-yellow transverse band, which is distinctly forked anteriorly as in the preceding species and almost to the same extent as in the ♀ of the present subspecies. The median area of indigo-blue tone, anteriorly only distinct as far as the upper median and the end of the cell, distally as far as the transverse band, which is itself faintly tinged with blue. Hindwing behind the apex near the distal margin with the blue tinge only in patches, in the middle of the wing becoming more or less of a band posteriorly. The distal margin is very nearly round, only at the middle median vein with an obtuse, scarcely appreciable angle. ♀ paler, the pale blue tinge on the forewing of a light violet tone, vaguely defined, leaving the end of the cell free, but rather distinctly developed into a broad band from the costal margin obliquely to the hindmargin. Hindwing at the base without blue dusting; indistinct traces of this first appear near the middle of the cell, whence it gradually increases in sharpness and forms in the middle of the wing a spot extending to just beyond the end of the cell and there somewhat more sharply defined. Mexico (from whence the type came), Guatemala and Nicaragua. Everywhere rare. From Honduras in coll. FRUHSTORFER. — **buboculus** *Btlr.*, described from Costa Rica, extends southwards to Colombia. Larger than *aesacus*, darker coloured and beneath more sharply marked. According to FASSL is one of the highest flying Brassolids in the Colombian Andes. — **juruana** *subsp. nov.* has rounder wings, is above more blue instead of violet and the yellow submarginal band of the forewing is narrower. From the Rio Juruá, a southern tributary of the Amazon (type in coll. STAUDINGER). *aesacus.* *buboculus.* *juruana.*

E. gerhardi *Weeks* is a species of which only a few examples have yet been found and was placed by its author in the genus *Caligo*. Upper surface brown, tinged with dark blue except at the costal margin. Under surface reddish ochreous. Costal margin of the hindwing somewhat flattened, at the apex rounded and passing gradually into the strongly undulate distal margin, the latter slightly angled at the middle median vein, anal angle fully rounded, basal area strongly hairy to the middle of the cell. Upper surface brown, a broad, ill-defined stripe, about from the middle of the cell nearly to the distal margin, suffused with blue; the hindmarginal area vaguely yellow-grey, posteriorly with grey-blue gloss, with a large, oval mealy whitish-yellow scent-spot, proximally adjoining the hindmarginal vein. Under surface reddish ochre-yellow, basal area and the zone behind the cell as far as the distal margin rather uniformly and finely striated with blackish. A transverse band in the middle of the wing vaguely red-brown, distally not sharply defined, proximally distinctly bounded by a silver-white transverse stripe which forms a continuation of the white band on the forewing. The stripe fades out posteriorly at a raised spot which indicates the scent-scale spot of the upper surface. In the cell, touching the stripe, there is an irregular zigzag marking, two pointed oval figures follow at the end of the cell, and in its anterior angle is placed a white spot. ♀ still unknown. Bolivia, Ecuador (Sarayacu). — In **pusillus** *Stich.* the ♂ is smaller than in the preceding form; the violet-blue dusting lighter and somewhat more distinct, broader on both wings, especially posteriorly and towards the apex of the forewing and the distal margin of the hindwing. The latter more obtusely angled at the middle median vein, apex of the forewing likewise somewhat more obtuse and less produced. Paraguay, Rio Grande do Sul. MABILDE bred *pusillus* on one occasion. The ♀ laid in captivity on the 1st of November 10 eggs, from which after 8 days emerged larvae of dark green colour; these moulted within 15 days, repeating this four or five times down to the 14th January and for the last time on the 4th March. The pupal stage, however, lasts only 13 days, while the larvae feed sometimes for 2 months, occasionally even for 4. The pupa somewhat resembles that of *Caligo martia*, but is more delicate, more compressed, of lighter colour, with a slight rosy gloss and separated light patches. The butterfly flies in Rio Grande throughout the summer and autumn, inhabits the forests and bamboo district, but is nowhere common. *gerhardi.* *pusillus.*

7. Genus: **Caligo** *Hbn.*

To this genus belong the most imposing forms of the whole family, which equally with the Morphids contribute to the character of the South American insect fauna, as some species are even among the commonest butterflies throughout the whole region. They are noteworthy not only for their gigantic size and the peculiar, mostly dull but nevertheless often very rich colouring of the wings, but also for their crepuscular habits, which do not fail to impress even the layman. Structurally *Caligo* nearly approaches the genus *Eryphanis*, with which it agrees in the small precostal cell of the hindwing, notwithstanding the gigantic size of the species. The Caligonids differ, however, from *Eryphanis* in the longer and more distinctly angled middle discocellular of the forewing, and the lower discocellular is steeper, not placed almost transversely. The oval androconial spot at the inner margin of the hindwing which is characteristic of *Eryphanis* is wanting in *Caligo*, but they have in common with the former a bare friction-area adjoinig the submedian, either with or without hair-pencil, and anteriorly at the subcostal a more or less distinct mealy spot. The pattern of the under surface reaches in *Caligo* the highest development of all the Brassolids and consists of delicate, reticulate, waved figures and striation, arranged in alternately light and dark shades on and in contrast with the yellowish ground. On the hindwing two large, brilliantly marked ocelli stand out very effectively, the anterior often crescentic, placed between the costal and subcostal, the posterior larger and placed between the first two median veins, often extending across them. These ocelli bear in their designs the greatest resemblance to the eyes in a peacock's tail, except that the latter are of a shining blue, whilst in *Caligo* the ground-colour is a beautiful orange, gradually shading off through brown into the deepest velvety black. The brilliant markings of the under surface induced Latreille to give to the genus the much more characteristic name of *Pavonia*, which unfortunately has had to sink on the score of priority. — Eyes naked or hairy. Palpus rather large, projecting far beyond the head, anteriorly densely covered with long, appressed hairs, with a hair-tuft dorsally. Terminal joint pointed. Antenna thin and delicate, scarcely reaching ½ the length of the wing, only gradually thickened towards the end. Forewing with strong costal vein and 5-branched subcostal, the first two veins arising before the end of the cell, but branches 3 and 4 placed near together almost in the apex of the wing. Cell broad and large, reaching almost to ⅔ of the wing, all 3 discocellulars well developed. Upper discocellular nearly as long as the lower. Larva slender, slightly arched in the middle, head with two to eight horns, some of which bear bristles. Abdomen produced into two points. Dorsum with five or six false spines. Ground-colour whitish or brown, frequently also green, always with both lateral and dorsal stripes. Favourite food-plants bananas, also Marantaceae; larva as a rule on the underside of the leaves, feeding chiefly at night, in the later stages hiding between dry, hanging leaves. Pupa moderately broad, a little narrowed anteriorly and posteriorly. Dorsal edge mostly strongly projecting. Colour yellowish to brown or reddish, on the wing-cases sometimes silvery spots. Pupal stage 20—25 days, but in some species of shorter duration. The imagines inhabit exclusively the dense forests, where they keep near the ground and by preference at the foot of the old trees. They are crepuscular butterflies which are only rarely met with by day. But if one happens to start them up they hide themselves very cleverly in the thickets and on the tree-trunks with the wings folded, and thus find protection. On the Amazon Dr. Hahnel once observed a bird chasing a *Caligo eurilochus*, but the butterfly eluded the beak of its pursuer again and again with incredible dexterity, as it flew from one thicket to another, until at last the hunted insect was concealed in the thickest confusion of branches and the tired bird had to desist from further pursuit. Profiting by the habit of the Caligos of frequenting those places where fallen fruit is lying, one can bait them with bananas, and I often succeeded in this way in capturing 20—25 examples of *C. beltrao* in one day. Some species, such as *C. martia*, visit bleeding trees, where they often sit for hours at the exudations. Occasionally on especially sultry days they even leave the wood and rest at its edge or on the road, and on the Capivary River in Santa Catharina I once found whole columns of *C. beltrao*, which, arranged like outposts, sat in long lines, one near to another, so that I did not known which to take first. In Colombia *C. oileus Fldr.* was met with on mule dung.

Like all large-winged species the Caligos nowhere ascend above the densest vegetation zone and it is probable that they never reach beyond 1000 m. above sea-level. Consequently they prefer the tropical zone, with a few offshoots into the subtropical region. Northwards some forms extend as far as Mexico, southwards to Paraguay and Bolivia. According to Godman and Salvin two groups may be separated on the ground of the copulatory organs. 1) *C. oileus* and *eurilochus* group with the valve simply dentate dorsally. 2) *C. atreus* group, valve with a dorsal, medial process, which itself is again dentate.

I. Sect. **Anagraphi** *Stich.*

Hindwing of the ♂ without hair-pencil on the bare friction-area at the hindmargin.

C. oedipus, a very rare, insignificant-looking species, splits up into two local races: **oedipus** *Stich.* *oedipus.* ♂: forewing above whitish, costal margin slightly darkened with grey-brown, broadly in the cell, distally more narrowly and before the fork of the last subcostal veins running out into a point. The veins in the anterior median area finely dusted with brown. A slight bluish tinge below the cell. The light band behind the cell indistinctly defined proximally, anteriorly strengthened by a nearly saffron-yellow patch. The distal area fairly uniform black-brown, the band near the margin of the wing only quite faintly indicated. The basal area of the hindwing grey-blue to about the end of the cell, obliquely bordered posteriorly, this part as well as the hindmarginal area nearly to the anal angle with blue reflections. Distal margin strongly undulate. ♀ larger, costal area clouded with deeper brown, the bluish tinge below the cell somewhat increased, the light transverse band behind the cell broader and more distinct, the veins very strongly dusted with brown, the spots in the anterior part of the dark brown distal area distinct, the light band before the distal margin better expressed, undulate, slightly dentate. The blue basal area of the hindwing more truncate, with a silky grey-blue gloss, at an oblique angle of light iridescent, the iridescence, however, not extending so far towards the hinder angle as in the ♂. **nocturna** *Stich.* is a subordinate form, in the ♂ of which *nocturna.* the forewing is almost uniformly darkened with smoke-brown as far as a somewhat lighter transverse stripe beyond the cell, the blue gloss restricted to the proximal part of the terminal area. The blue basal area of the hindwing somewhat reduced. Forewing of the ♀ with stronger and more extended blue gloss and duller but more distinct dentate band near the distal margin. Ground-colour in general even darker brown. Transitions occur to the type-form. Colombia. — **fruhstorferi** *Stich.* (64 c) is in the ♂ somewhat smaller on an *fruhstorferi.* average than the preceeding; forewing somewhat more rounded, costal area lighter brownish, transparent, but broader and entirely filling up the end of the cell. The confused figures in the cell beneath distinctly visible above, the light transverse band behind the cell better defined, the bluish dusting below the cell somewhat more copious and extended to the inner boundary of the transverse band, which shows through from the underside. The band before the distal margin likewise somewhat better expressed. Hindwing uniformly rounded, distal margin only quite weakly undulate. The blue basal area viewed from above with a silky gloss, in an oblique light with blue reflections for about the same extent as in typical *oedipus*. Under surface with the posterior eye-spot relatively larger. Costal area of the forewing in the ♀ likewise darkened as far as the light median band, strongly transparent, the blue suffusion behind the cell more distinct, also extended on to the anterior part of the cell, but there weaker. The band behind the cell anteriorly strongly dentate, posteriorly feebly curved, the spots in the costal part of the distal area very distinct, the band before the distal margin almost whitish yellow, its boundary strongly dentate, the distal margin itself pale ochre-brown. The blue basal area of the hindwing reaches distally to beyond the end of the cell; viewed from above strongly glossy, in an oblique light with bright blue reflection. Distal margin of the hindwing likewise very little undulate and somewhat more copiously dusted with grey-white. Under surface as in the ♂, except that the dark-shaded band in the middle of the forewing is prolonged to the submedian and the two undulate or dentate bands in the distal area of the hindwing are very sharply expressed. Honduras, probably also in other parts of Central America.

C. oileus is a protean species which seems to be distributed from the Andes to Mexico, southwards reaching Bolivia, but on the Atlantic side apparently not extending beyond Venezuela. Six or seven known races, some of which are not very sharply differentiated. — **oileus** *Fldr.*, the name-type, came from *oileus.* Venezuela. Forewing in the ♂ almost brownish grey, posteriorly somewhat lighter, markings of the under surface showing through. The band before the distal margin washed-out, but always remaining visible. The rest of the marginal area distally pale black-brown, the dark spots in the apical area distinct, the light band basally more or less distinctly projecting along the veins; the blue gloss below the cell weak, often only perceptible in an oblique light. ♀ larger, wings smoke-brown to the narrow transverse band, basal part to near the costa and to the posterior part of the cell slightly suffused with bluish, rather strongly glossy, the rest as in the ♂, but with the band before the distal margin more distinct. Under surface with moderately widened whitish band behind the cell of the forewing. Hindwing with distinctly developed dentate band in the distal part. The submarginal lines on the underside of the forewing in both ♂ and ♀ shortly and regularly dentate. Venezuela. — **scamander** *Bdv.* has the apex somewhat produced. Costal area darkened as far *scamander.* as the median, the anal area relieved with whitish grey; only at the base a faint blue gloss. Transverse band as a rule rather broad, anteriorly narrower, bone-white, quite faintly tinged with yellow. Markings of the under surface showing through above. ♀ larger, wings more rounded, transverse band widened, especially beneath, its boundary-line curved distad. Anal area as far as the transverse band somewhat darker and more copiously shot with blue. Distal margin of the hindwing somewhat less undulate, the proximal area viewed from above somewhat more distinct but paler blue-grey. On the under surface the undulate band behind the cell of the hindwing especially sharply expressed, with metallic black-blue gloss. In both sexes the lines near the distal margin on the underside of the forewing less regular and more shallowly curved than in the typical subspecies. Central America (Costa Rica, Panama [?], Mexico [?], Guatemala [?]). — **philademus** *Stgr.*, from the *philademus.* province of Antioquia in Colombia, closely approximates to *scamander* and likewise to *oileus Fldr.* from Venezuela, but is darker, hindwing above more strongly shot with greenish blue. ♂ under surface with deep brown median area, ♀ scarcely lighter in the distal area. From the Cauca Valley, in coll. FRUHSTORFER. — *phorbas.* **phorbas** *Röb.* is somewhat more brightly coloured than the typical *oileus*, the band behind the cell of the forewing consequently standing out more distinctly and in general somewhat less dentate; the basal and hindmarginal areas somewhat more strongly tinged with blue. ♀ without appreciable constant differences from that of the *umbratilis.* preceding subspecies. Ecuador. Type in coll. Fruhstorfer. — In **umbratilis** *Stich.* the ♂ is darkened with smoke-brown above, the blue tinge behind the cell of the forewing only weak, rarely somewhat stronger. The transverse band distally to the cell washed-out, occasionally, however, distinctly expressed; in the latter case anteriorly narrow, whitish, posteriorly somewhat widened, yellowish and terminating at the posterior median vein. The band near the distal margin likewise more or less distinct, the dark spots at the costal margin near the apex well developed. Under surface very sharply marked and with much white in the ground-colour, particularly *philinos.* in the distal part of the hindwing. Peru. — **philinos** *Fruhst.* (65 a). ♂ somewhat smaller and less slender than *scamander*. Forewing grey-brown, copiously shaded with blue. The yellow area of the forewing reduced to a narrow but distinct band. Ground-colour darker, particularly on the forewing. The hindwing, however, more narrowly margined with black, on the other hand with broader distal border, grey in the ♂, yellowish grey in the ♀. Under surface: the brown discal band of the hindwing narrower, the yellow submarginal zone broader and lighter, the discal band of the forewing considerably narrower. Bolivia.

zeuxippus. **C. zeuxippus** *Druce* (65 b) inhabits Ecuador. Under surface somewhat resembling that of *oileus*. It is noteworthy for the strikingly light basal area, particularly on the hindwing, which is delicately striated with white. The ocelli are placed in a light coffee-brown median area, which again is surrounded by a zone of light striation.

placidianus. **C. placidianus** *Stgr.*, originally described from Sarayacu in Peru and from São Paulo de Olivenca on the Upper Amazon, is a very large species with broad, unmarked, dark distal border on the forewing, before which an undecided yellowish band, distally rather sharply defined, runs to the posterior median. The ♀ has the basal half of the forewing blue-grey, bounded by a still more indefinite yellowish grey band. Under surface very similar to that of *C. oileus*, but at once distinguishable from this and indeed from all other known species by a deep brown area running from the posterior to the anterior median along the cell-wall and anteriorly narrowed; this occurs also on the hindwing, but there covers the entire middle of the wing, is sharply cut off proximally, but considerably widened distally about the anal ocellus. Cell of the forewing covered with elegant black mark- *micans.* ings looking like cumulus clouds. **micans** *Röb.* describes a slightly modified local form from Ecuador in which the basal half of the hindwing above has a somewhat more intensive gloss.

beltrao. **C. beltrao** *Ill.* (= demosthenes *Perry*, inachis *Godt.*) (65 b) is one of the most brilliantly coloured species of the genus and among the characteristic butterflies of central and southern Brazil. All day long they remain in the lower brushwood or round the trunks of the forest giants, where they hide near the ground. Only in the evening twilight or in the early morning, before the daylight has dispersed the last shadows of the night, they come out of their hiding-places for a short time. One can then sometimes see them sitting on the road in large numbers. In Santa Catharina in the valley of the Capivary River I observed that the butterflies were positively common on sultry days and one might with truth speak of whole regiments of *Caligo*, of which the outposts were arranged at the edge of the woods and at such short distances that one hardly knew which to take first. *beltrao* can also be attracted with bananas and it was a pretty sight to see the giant Caligos hanging on the bait in living clusters in company with *Dasyophthalma creusa*, *Eryphanis reevesi* and *Prepona meander*. ♂ beneath predominantly irrorated with a fine coffee-brown, with very broad median area of the same colour, which traverses both wings, changes into black beyond the cell and is distally bordered by a zone of whitish and purple dusting. Hindwing with the anal ocellus shaped like a hazel-nut with the point placed posteriorly, the ocellus margined with a beautiful light yellow. The ♀ larger, wings broader, more rounded, colouring duller. Apex of the forewing light ochre-yellow, only proximally somewhat tinged with orange, the dirty yellow marginal stripe broader, gradually narrowing to the anal angle. The white costal spot in the yellow area very conspicuous, the adjoining distal black dusting in the apex more distinct, condensed into a double spot with white sagittate or lunulate spots accompanying it. Under surface somewhat lighter, the band-like brown shading in the middle of the forewing behind the posterior median vein more distinctly prolonged; close to the distal margin run two blackish parallel lines, which are anteriorly somewhat more delicate brownish, have whitish and yellowish bordering and are gently curved, but behind the eye-spot project basewards near the apex and then run to the anal angle in large, sharp teeth, some of which are bidentate. On the hindwing the bands beyond the cell better expressed, the distal margin more broadly brown and with a second dentate band similar to the first-named, but less distinct. Abdomen with lighter grey-blue hairs. — Larva on bananas, like that of *C. eurilochus brasiliensis* green when young with elongate brown dorsal spots and a white and brown lateral stripe. The spots disappear later and the ground-colour becomes green; in the adult stage the caterpillar is dirty green to yellowish brown, irregularly shaded with black, laterally with a pure white stripe, edged with black at both sides, along the stigmata: the body tapering anteriorly, on the dorsum with soft warts (false thorns), the head with a crest of eight horns. Pupa in size and markings in general like that of *eurylochus*, but paler and without bristles (W. Müller). The ♂ figured came from Rio Grande do Sul, where *beltrao* has become very rare. Also in Rio de Janeiro the species is no longer very common, but it apparently occurs in larger numbers in Espiritu Santo. Examples from there are by far the largest, somewhat lighter blue, and both sexes have the apical spot on the forewing paler yellow and more extended than in my Santa Catharina specimens. Moreover the basal area on the underside of the hindwing is appreciably lighter and in the ♀ the distal border of the brown median area is much lighter, one might almost say pure white. According to BURMEISTER *beltrao* also occurs in Argentina, but I do not know any Argentine examples in nature.

II. Sect. **Graphiophori** *Stich.*

Hindwing with a small hair-pencil on the bare friction-area at the submedian.

C. teucer, one of the most inconspicuous species, is distributed over the entire region in which the Caligos occur with the exception only of Central America and Mexico. *teucer* is less susceptible to climatic influences than other species of the genus and consequently only splits up into a small number of not very sharply differentiated local forms. — In **insulanus** *Stich.* the costal area of the forewing in the ♂ is of an indefinite *insulanus.* light grey, not or scarcely brownish, the yellowish white transverse band distally to the cell very narrow and dull, the triangular hindmarginal area grey-blue fully to its anterior limit, also the cell for about half its breadth with a vague grey-blue tinge. The distal marginal area blackish, the undulate lines near the margin only quite indistinctly showing through and only slight traces of a band present between them. Basal area of the hindwing grey-blue, in an oblique light with violet-blue reflection in its distal part, extending nearly to the end of the cell, distal half of the wing blackish with quite fine whitish border. The ♀ larger, the band of the forewing somewhat broader, anteriorly more or less dusted with dark, from the posterior angle of the cell onwards purer whitish yellow, posteriorly again blurred. The blue dusting of the hindmarginal area is continued anteriorly in the cell, only leaving a narrow costal stripe. The band near the distal margin of a very fine and distinct whitish yellow, the proximal boundary strongly curved and very sharp, the distal less strong, but distinctly defined by a dark-dusted stripe. Hindwing with the basal area widened, distally likewise with a beautiful iridescence. This extends to beyond the cell and to the hindmarginal vein. Distal margin of the hindwing somewhat more strongly dusted with whitish than in the ♂; abdomen with bluish gloss. Trinidad. — **suzanna** *Deyr.* *suzanna.* is a dark subspecies; forewing from the hindmargin nearly to the costal margin and the narrow whitish band tinged with blue. Marginal area almost black, the submarginal undulate line not conspicuous, the margin itself strongly undulate, quite finely edged with whitish. Hindwing velvety black, distal margin finely whitish. Basal area greenish to near the end of the cell or even somewhat further and nearly to the anal angle, at its extremity with clear blue reflections. Under surface strongly and copiously marbled with brown and black-brown. In the posterior median cellule of the forewing is placed a small, rather distinct eye-spot, a larger one near the apex. The ring round the posterior eye-spot of the hindwing is very light yellow, nearly white, laterally and posteriorly more yellow, at the outer margin changing into rust-yellow. The brown band-like colouring between the anterior and posterior eye-spots only persists as a narrow, sometimes quite indistinct stripe running through the cell, the smaller oval patch distally to the middle discocellular more or less distinct. The ♀ has broader wings, otherwise quite similar. In the forewing the light band running between the marginal lines near the distal margin and the black spots at the costal margin near the apex more distinctly expressed. The blue reflection on the hindwing extended somewhat beyond the end of the cell. On the under surface the hindmarginal area of the forewing to the submedian striated, like the rest of the wing, the small posterior eye-spot in the distal area absent. In the median area of the hindwing the brown band-like shading better developed, in the cell a distinct elongate light patch. In general the striation and marbling on the entire surface of both wings somewhat coarser and darker. In transitions to the typical subspecies, not locally constant. Colombia. — **phorkys** *subsp. nov.* differs from *phoroneus Fruhst.* in the narrower, *phorkys.* washed-out yellowish grey longitudinal band of the forewing, which is broken up into separate spots and is also distinguished at once from *suzanna Deyr.* by the isolated patches. Under surface lighter than *phoroneus*, particularly the basal part and the distal area of the hindwing. Coroico, Bolivia, 1200 m. — In **teucer** *L.* *teucer.* the costal area of the forewing is broadly grey-brown, cell also grey-brown except a narrow stripe in the posterior half. The brown area is approximately spindle-shaped with the points placed at the base of the wing and at the costa before the fork of the 4th and 5th subcostal veins. The transverse band beyond the cell begins 3—4 mm. in width, is distinct to the angle of the cell, then only sharply defined distally, and terminates at the posterior median vein. In the middle and posterior median cellules it forms two shallow curves. The light grey median area is widened posteriorly and forms a long acute-angled triangle to the hindmargin. Posteriorly the colour becomes a trifle darker, particularly at the base of the wing, and is slightly tinged with bluish. The distal area, for an average breadth of 18—19 mm., is dark to pale smoke-brown, fringes and a quite fine marginal stripe dirty white, the submarginal lines of the under surface show through, and between them there is a very faint, somewhat lighter undulate band, which scarcely contrasts at all in colour with the extreme marginal area and is only separated from this by the distal line, but on the other hand is proximally more distinctly defined by the darker median area. Posteriorly the marginal markings become quite blurred and the colour assumes a uniformly dark tone for the whole breadth of the distal area. Hindwing black-brown, the fringes from the apex nearly to the hinder angle whitish, basal area behind the grey costal zone grey-blue, in an oblique light greenish, distally with violet-blue reflection. This reaches in the cell about to its middle, below it to two-thirds of the hindmargin and is gradually lost in the ground-colour. In the costal area of the hindwing and on almost the whole of the forewing the dark markings of the under surface show through slightly. Under surface rather coarsely and profusely marbled, forewing with two eye-spots. The ♀ is larger, the bluish colour below the cell of the forewing weaker, the light band beyond the cell broader, the undulate band between the strongly dentate lines which show through from beneath near the distal margin standing out more distinctly. The blue on the hindwing further extended, deeper in tone, with less greenish reflection. In the Amazon region extending towards the west and north-west (Peru, Colombia), this race becomes transitional towards *C. teucer suzanna*, being more brightly coloured, with a somewhat darker costal area on the forewing and more copious blue dusting at the hindmargin, while the hindwing shows a more extended blue basal area. Guiana, northern Brazil, western Peru. — *nubilus.* **nubilus** *Fruhst.* (63 c). Band distally to the cell of the forewing completely suppressed, ground-colour in the cell especially dark, a dull blue gloss spreads almost uniformly over the whole proximal half of both wings. British Guiana. — *obidonus.* **obidonus** *Fruhst.* Paler than the type-form. The blue basal area of the hindwing extended to the end of the cell, hence the distal and anal area more narrowly black-brown. Under surface more marbled with white, in the cell of the forewing with brighter white bands. In the hindwing the posterior eye-spot with smaller black pupil and broader yellow ring, in the cell the white elongate patches standing out very brightly on a brown ground, the oval ring-spot before the middle discocellular on the other hand more weakly coloured. Amazons (Obidos). — *japetus.* **japetus** *Stich.*, from Paraguay, has broader wings than typical *teucer*; the spindle-shaped brown costal area widened so as only to leave free the extreme distal angle of the cell, which assumes the colour of the adjoining transverse band. This is almost ochre-yellow, posteriorly somewhat paler. The triangular grey area behind the cell, which posteriorly to and in continuation of the transverse band is bounded by the dark brown distal area and anteriorly reaches to the origin of the middle median vein, is shot with bluish throughout, and a narrow posterior stripe in the cell is also slightly tinged with blue; in an oblique light this dusting shows a beautiful sky-blue sheen. The light transverse band between the curved lines which show through from beneath near the distal margin more distinct and proximally in particular standing out very sharply against the dark area. Blue basal area of the hindwing extended to the end of the cell and nearly to the hinder angle, in an oblique light with brilliant violet-blue reflection. The strongly undulate distal margin profusely dusted with whitish, particularly at the incisions. Under surface in general with somewhat lighter ground-colour, the distal half of the hindwing in particular with strong whitish admixture. In the forewing only one eye-spot, near the apex. ♀ larger; the bluish tinge on the forewing spreads over almost the entire cell, but is somewhat less pronounced. The band behind the cell broader, anteriorly, in the radial interspaces, with pointed, wedge-shaped teeth proximally. The band near the distal margin dirty ochre-yellow, more distinctly defined, distally in particular bordered by a stripe more strongly dusted with black-brown. Hindwing with the basal area considerably widened, in an oblique light with brilliant violet-blue and greenish reflections. It extends about 6—7 mm. beyond the end of the cell, nearly reaching the anal angle. Under surface somewhat less brightly and more coarsely marked. Thorax and abdomen strongly dusted with grey-blue. — *phoroneus.* **phoroneus** *Fruhst.* This local race, with the upper surface strongly darkened, forms a transition from the light forms of the Lower Amazon region to the dark *suzanna Deyr.* from Colombia. The light yellowish area which in *teucer* and *obidonus Fruhst.* spreads over a third of the forewing is reduced to a rather sharply defined, narrow dark yellow band, which in the ♂ still covers the extreme apex of the cell on the forewing. In the ♀ this band is even more narrowed and runs beyond the cell, gradually becoming darker and terminating before the 3rd median vein. The cell of the ♂♂ is darkened with the exception of the apical and lower parts, that of the ♀♀ entirely darkened, and shot with deep blue. The hindwing except the black distal margin with as dark blue gloss as in *euphorbus Fldr.* The large ocelli on the underside of the hindwing characterized by having a brown border, which is much more extended than in *teucer* and *obidonus*. Jaupes.

C. illioneus occurs together with *teucer*, but its range extends somewhat further south on the Atlantic coast and it is still met with at Rio de Janeiro, where according to Bönninghausen it occurs on the north side of the bay at Piedade. Unlike *teucer*, its early stages are well known. Larva on bananas. Northwards *illioneus* extends as far as Panama. Such localities as Guatemala and Mexico are no doubt due to errors in determination, it having been confused with *memnon*, which is everywhere common in those countries. — *oberon.* **oberon** *Btlr.* ♂, very dull-coloured, the blue of the forewing in the costal and posterior part of the cell very faint, the posterior angle of the latter entirely free, the reflection strong but darker. Transverse bands dull, sometimes even indistinct. The proximal one as a rule only somewhat more distinct anteriorly, from the radials onwards obsolescent, the distal sinuous, the costal curves more, the anal less strongly diffused on either side of the veins in such a way that the rays are as a rule united anteriorly with the smaller curves of the proximal band, forming elongate ring-spots in which are enclosed oval spots of the dark brown ground-colour, sometimes proximally truncate. This formation, although it occurs more rarely also in single individuals of other subspecies (particularly in *C. i. polyxenus*), is in general very characteristic of *oberon*. ♀ paler, with the same peculiarities, the transverse bands of the forewing somewhat lighter, the markings of the under surface showing through more strongly. Panama. — *praxsiodus.* **praxsiodus** *subsp. nov.* is before me in four examples from different parts of Peru. It approximates in its small size to the Trinidad race and differs from the type-form in the brighter, more brilliantly glossy reflection on the basal part of both wings, which are also traversed by very narrow inconspicuous longitudinal bands. By these *praxsiodus* may also be at once separated from *pampeiro Fruhst.*, in which the bright ochre-yellow longitudinal bands are always conspicuous. Under surface very closely resembling *oberon Btlr.*, but with still darker striation, the anal eye-spots very much smaller, the whitish dusting in the median and submarginal areas nearly obsolete. — **pheidriades** *subsp. nov.* ♂ somewhat smaller than *pheidriades.* *oberon Btlr.* from Colombia, but more brightly coloured, not only more glossy blue but also with a stronger yellow submarginal band on the forewing than that form and *pampeiro Fruhst.* from Paraguay. Under surface very characteristic on account of the sharply contrasting bands, alternately brown or whitish grey, which traverse the hindwing in particular. The arrangement of the band-like areas as in *oberon*, but the colouring more of the brown tone of *praxsiodus*, all the light areas, however, more extended than in Peru ♂♂. Ocelli of the hindwing considerably larger than in *praxsiodus*, with the bordering much lighter, nearly whitish yellow. Coroico, Bolivia, from 1200 m. — **saltus** *Kaye* is always smaller than *polyxenus*, the ♀ especially *saltus.* with the bands of the forewing more grey instead of brightly coloured. Egg (according to Kaye and Guppy) spherical, whitish, with regular longitudinal ribbing. Young larva whitish, dorsal surface with 2 red double stripes at the sides, head large, brown, strongly hairy, a long, branched tail-fork; after the first moult the head more slender, reddish, with branched horns; upperside of the body green with a brown stripe and a white upper lateral longitudinal line, below the stigmatal line striped with white and reddish. Tail-fork simple, on the 6th segment a thorn-like point. After the second moult the body becomes brownish, with two dorsal points on the 6th and 8th segments, and shows an upper lateral stripe and on the separate segments brownish oblique stripes decreasing posteriorly; stigmatal lines as before. The full-grown caterpillar is cylindrical, tapering anteriorly and posteriorly; head broad, flat, obliquely sloping anteriorly, striped with black-brown, with 2 pairs of shorter and 1 pair of longer horns; the first segments of the body strongly grooved transversely, on the dorsum two short points; ground-colour of the body dirty white, dorsal stripe blackish, anteriorly cleft, at both sides an upper lateral dark double line, below this a greenish lateral stripe, from which on the separate segments oblique stripes ascend anteriorly, below it a reddish brown stigmatal stripe, bordered with white on both sides. Ventral surface and legs dirty green, fork shortened. Entire length 115 mm., length of the fork 9 mm. Trinidad; St. Vincent (British Museum). — **polyxenus** *Stich.* Transverse bands of the forewing somewhat *polyxenus.* widened and particularly bright ochre-yellow, more rarely somewhat darker. The band at the cell anteriorly somewhat dentate, then nearly straight, proximally but little incised at the veins. The band near the distal margin strongly zigzag, anteriorly the separate teeth more or less diffused proximally on the veins. Distal margin of the hindwing anteriorly more broadly, posteriorly narrowly dusted with whitish. On the underside of the hindwing the posterior eye-spot is as a rule especially large and broadly ringed with whitish yellow. — In **ilioneus** *Cr.* (64 c) the ground-colour of the ♂ is in general more dusky, but the wings have a strong blue *ilioneus.* gloss. Cell of the forewing mostly shot with blue throughout, costally and basally paler, almost grey-blue. Transverse bands ochre-yellow, the tone of colour inconstant, mostly not quite pure, sometimes even strongly darkened, both on the whole narrow, the one adjoining the cell somewhat dentate anteriorly, from the lower radial onwards nearly straight; it terminates at the lower median vein and its posterior part is obsolescent. The submarginal band anteriorly somewhat sinuous, then at most slightly undulate and in its general course but little curved. This also is somewhat more indistinct posteriorly, likewise terminating at the lower median vein or somewhat before it. The blue basal area of the hindwing extended to beyond the end of the cell and nearly reaching the hinder angle, strongly iridescent, but paler anteriorly. On the subcostal, close to the precostal cell, is placed a flattened, blackish scent-scale spot, with somewhat bluish reflection in a side light, which extends on to the cell. Fringes of both wings whitish yellow, distal margin of the hindwing not at all or only quite narrowly dusted with whitish. ♀. Considerably paler in colour. Forewing less dusted with blue, the transverse bands lighter, broader, sometimes more strongly dentate and undulate. Hindwing with broad grey-brown or dirty whitish costal area, in which the striation of the under surface shows through more distinctly. Hence the blue basal area is somewhat restricted anteriorly. Distal margin of the hindwing somewhat more, but still only slightly dusted with whitish. Larva very similar to that of *C. eurilochus*, but smaller and proportionately thicker. Body with fine transverse grooves, on the dorsum with 6 weak, spine-like points, otherwise covered with short, stiff hairs. Ground-colour yellow-brown with black dorsal line, which is forked anteriorly. The body laterally striped with alternate light and dark brown and on the upper half with short brown oblique stripes. Ventral surface dark brown. Head of the colour of the body, with five broad dark stripes. Pupa compact, suspended, at the vertex with narrow helmet-like comb, of yellowish ground-colour, marked with brown, with two very conspicuous silver spots on the wing-cases. Guiana, Brazil, Amazons, Pará, Rio de Janeiro. Examples from Rio de Janeiro are wanting in my collection; there are some from Pernambuco in the British Museum. — **pampeiro** *Fruhst.* is smaller, lighter, the blue reflection stronger, but the blue dusting on the *pampeiro.* forewing somewhat reduced, the distal part of the cell mostly remaing brown. Transverse bands pure orange-yellow, the proximal but little sinuous or dentate, posteriorly somewhat duller, the submarginal more strongly sinuous and dentate. Distal margin more strongly excised, border of the hindwing very broadly dusted with yellowish white in curves. The large ocellus on the underside of the hindwing shows a tendency to posterior elongation. ♀ paler, the bands on the forewing lighter, the submarginal broader. Distal margin of the hindwing bordered with white, in the interspaces between the veins broad yellow-white crescentic spots. Paraguay.

C. prometheus somewhat resembles *C. memnon* (65 a) above, but is considerably larger, the basal part of the forewing more extended pale yellowish, that of the hindwing more richly suffused with blue. Range, so far as is at present known, confined to Colombia and Ecuador. *promotheus.* **prometheus** *Koll.* On the forewing the grey dusting in the costal area at and behind the end of the cell is reduced to a narrow stripe, which is only towards the end, before the fork of the fourth and fifth subcostal venis, a trifle widened. Hindwing in an oblique light with intensive blue reflection, at the base greenish, from the end of the cell to the distal margin a beautiful azure blue; the sheen decreases somewhat in strength anteriorly, but leaves only the apical area and a costal stripe free. Under surface of the forewing copiously striated; behind and distally to the cell, starting from its posterior angle, are placed two connected blackish arcuate spots, mostly very distinct and sharply expressed, bordering the light transverse band proximally. Colombia; Nicaragua (?). — *epimetheus.* **epimetheus** *Fldr.* is a lowland form from eastern Colombia. Somewhat smaller than the type-form, the grey dusting at the costal margin of the forewing broader, on the other hand the blue colour on the hindwing confined to the proximal half, in an oblique light less iridescent, but viewed from above more distinctly defined. Colombia: Rio Aquara Valley, West Cordilleras, 2000 m. The egg is almost as large as that of *Saturnia pyri*, round, somewhat flattened at both poles, the sides with longitudinal grooves, which again are divided into cells by horizontal belts. Towards the base these are broken up into smaller and smaller dots and finally terminate in a smooth surface. The apex of the egg forms a wart-like elevation of brown colour, the micropyle is placed somewhat at the side. The larva is of the shape of the typical *Caligo* larva figured in SCHATZ. It is brown-grey, on the dorsum with three lighter angular markings, the vertices of which run back into the mediodorsal line. Many specimens attain 13 cm., these mostly yielding females. I found the larvae always in small companies of up to 8 specimens on the lower end of the stalks of Platanillos (wild bananas), or hidden in dry leaves; they only feed at night and always return to their old place, where they mostly sit closely packed together. The pupa is very similar to that of *Cal. eurylochus*, ornamented with a silvery shoulder-spot. The pupal stage lasts 4 weeks. In breeding the number of specimens of the two sexes was about equal. — *anaximandrus.* **anaximandrus** *Fruhst.* Replaces the small lowland form *epimetheus Fldr.* of eastern Colombia in the transandean region, and is also of small habitus. The ♂ approaches *atlas Röb.* from Ecuador, with which it entirely agrees above except that the black marginal band of the forewing is somewhat more sharply defined proximally. The under surface, however, differs considerably in the more lively, brightly contrasted colouring. The submarginal black hatching on the forewing is almost absent, the bordering of the ocelli is light red-brown instead of nearly black. Hindwing with brown instead of nearly black foreground to the anal ocellus, the eye-spots themselves scarcely half as broadly margined with black. The distinct black-striated submarginal band of *atlas* is wanting; in general the entire distal area of the hindwing is whitish watered with yellowish. Basal part likewise predominantly whitish instead of black. The ♀, unlike the ♂, is distinctly modified above also and especially characterized by the yellowish area extending as a sharply defined band to the costal margin. Compared with *atlas Röb.* from Ecuador this light part of the wing is altogether more pronounced and contrasts sharply with the black terminal area, which is proximally very neatly undulate, with distinct but not deep incisions. Hindwing somewhat more richly coloured, distally of a finer whitish yellow than in *atlas*. Under surface: coloration gayer, the distal area in particular striated with yellow rather than brown-black. The brown bordering of the anal ocellus, which touches the black ring, scarcely half as broad as in Ecuador ♀♀. This handsome new West Colombian form was discovered by A. H. FASSL on the upper Rio Negro at an elevation of 800 m. — *atlas.* **atlas** *Röb.* Forewing of the ♂ rather narrow, apex more pointed, distal margin of both wings more strongly undulate than in the preceding, otherwise similar on the upper surface to *epimetheus*. Costal area of the forewing broadly grey-brown, towards the end of the cell but little narrowed and distally to this again widened as far as the middle discocellular, the blue-grey basal dusting behind the cell on the contrary somewhat reduced. Beneath the striation and other markings more sparse, the dark curved transverse line behind the cell being absent or only weakly indicated and the space immediately behind the distal half of the cell and part of the cell itself only quite finely watered with gold-yellow. Consequently the upper surface, on which the dark markings show through in the whitish areas, is purer white beyond the cell as far as the posterior median vein. On the hindwing the blue reflection weaker and only extending to towards the end of the cell and towards the hinder angle. At the distal margin occasionally a further quite faint bluish gloss perceptible in places. On the under surface the ground-colour more white or bluish white, but the striation coarser and darker, the curved bands near the distal margin as a rule only indistinct or not developed at all, the posterior eye-spot mostly somewhat smaller than in the preceding. Ecuador.

C. memnon may be regarded as the most northerly *Caligo* form, is at home exclusively in the Central American and Colombian-Venezuelan subregions of the *Caligo* area and southwards apparently does not occur even in Ecuador. *memnon* is considered one of the commonest butterflies of Mexico and Guatemala and is represented in every consignment from the tropical parts of those countries. Nothwithstanding this we have no information concerning the early stages. *memnon.* **memnon** *Fldr.* Under surface of the forewing mostly only sparsely striated in the cell. In addition to some irregular dark brown zigzag and undulate lines and some brownish clouding the surface of the wing is finely watered with reddish yellow, sparingly beyond the cell. The dark nebulous band distally to the cell always distinct, but from the end of the cell onwards becoming weaker or entirely absent. Hindwing in the basal area striated coarsely with white and dark brown, in the distal area finely and uniformly with bluish white-grey and brown. The median area with the 3 eye-spots strongly brown in ground-colour, the elongate light cell-patch, however, not very conspicuous. The ♀ is larger, with exactly the same markings, but the band near the distal margin of the forewing considerably more sharply expressed. It consists of a row of whitish lunules or crescentic spots, deeply incised proximally at the veins, distally less sharply defined, but still distinctly contrasted with the grey-brown distal margin. In the costal part of the dark brown distal area there are mostly 4 rather distinct round black spots in the interneural spaces near the apex. Costal area of the hindwing relieved with grey-white and the distal margin more strongly dusted with whitish. Under surface lighter, the brown zigzag stripes and striation on the forewing reduced; the dark band beyond the cell as a rule narrow but distinct, the darker area behind the transverse band but little striated; in it are placed wedge-shaped, loosely connected dark teeth. Hindwing more coarsely striated, the brown median area less conspicuous, in the outer part a curved band, mostly standing out very sharply. Mexico, Honduras, Nicaragua, Costa Rica (?). — **menes** *Fruhst.* ♂ differing from *memnon Fldr.* from Mexico in the *menes.* darker ground-colour of the wings (particularly in the costal area of the forewing), which is caused by the increase of brown scaling on the under surface. The hindwing with more of the blue reflection, but less intensive than in *telamonius Fldr.* The under surface strongly suggests *teucer* in the black discal band of the forewing; the forewing bears, however, larger ocelli than in *memnon* or in *teucer*, and the middle eye-spot, between the radials, is more strongly developed. The ♀ differs from *memnon* and *teucer* in the much narrower, but more sharply defined, black distal border of the hindwing. Chiriqui. — **diluta** *Stich.* Commoner form of the subspecies *menes.* In *diluta.* the ♂ the forewing is almost as in *C. m. memnon*, costal area occasionally even narrower and but little darker than the light, pure white-yellow ground-colour, but the band near the distal margin as in the type-form quite blurred. On the hindwing the blue reflection somewhat more extended, but not reaching the distal margin. It usually disappears at the end of the cell and shortly before the hinder angle, but in all cases a faint bluish violet tinge is perceptible at the distal margin when viewed obliquely, much as in *C. idomeneus*, only not so strong. Under surface variable, usually as in *menes*, but even less marked, the distal half of the cell of the forewing and the adjoining area behind it only delicately watered with reddish yellow and white; only in the posterior projecting angle of the cell some brownish striation is present. The dark transverse band behind the cell then only persists in the anterior part and from the posterior angle of the cell is entirely absent or represented by two slightly shaded lunules. The proximal of the two curved bands near the distal margin again more sharply dentate than in the type-form. Hindwing mostly remaining rather dark, the posterior eye-spot as a rule somewhat reduced. Otherwise without essential differences. ♀: costal area more broadly grey-brown, in the distal half of the cell somewhat constricted, thus better developed than in *memnon* ♀; the band near the distal margin more distinctly defined than in the ♂, but less sharp and not so clear as in *memnon.* Blue reflection on the hindwing about as in the ♀ of this subspecies, even somewhat more restricted. Under surface of the forewing in the distal half of the cell pretty uniformly striated with brownish, the area behind the cell to the lower median vein almost without markings, the dark transverse band distally to the cell here only weakly indicated. Under surface of the hindwing with very close transverse striation, predominantly brown, the median area in particular also broadly pure brown, the light cell-patch very distinctly defined. The eye-spots large and distinct, the middle one rather full and almost round; behind it, in the angle of the lower radial and discocellular, sometimes a small round accessory ocellus. Panama (Chiriqui). — **peleus** *Stich.* ♂: forewing *peleus.* pale ochre-yellow, basal and costal areas rather broadly shaded with light grey-brown, the markings of the under surface showing through rather distinctly. Distally to the cell a narrow transverse band of the ground-colour, distinct as far as the posterior median vein. Distal area nearly black, the margin itself smoke-brown; between the dentate lines showing through from beneath a washed-out curved band, which is only anteriorly somewhat lighter. Hindwing with the distal margin very slightly undulate and quite narrowly dusted with whitish. Blue reflection a beautiful indigo, but only extending to the end of the cell and to shortly before the anal angle. The reflection shades gradually into the deep velvet-black colour of the distal half, which in places still shows some bluish gloss. Under surface sharply and densely striated and marbled. Forewing below the strongly developed anterior eye-spot sometimes with 3 further dark spots placed one behind another. Ground-colour in the cell yellowish white, the light transverse band behind the cell sharply defined basally. Hindwing as in the following form; in the type specimen there is before the middle ringed eye-spot a smaller, brownish accessory ocelles, with white pupil and black border, separated from the former by the anterior radial. Venezuela (Merida). — **telamonius** *Fldr.* ♂: forewing light ochre-yellow. Costal area rather broadly, but only slightly, darkened with *telamonius.* grey-brown, markings of the under surface showing through, the light band beyond the cell well distinguishable as far as the posterior median vein. Marginal area brown, the striation of the under surface still traceable. Submarginal band very indistinct. Hindwing with strong blue reflection, but when viewed from above only appearing shot with grey-blue from the base to the end of the cell and nearly to the anal angle. In an oblique light almost the whole wing except the costal area and a spot in the apex shows deep indigo-blue reflections, at the base slightly greenish. Distal margin undulate, slightly dusted with whitish. Under surface very profusely striated and marbled, as in the form *menes*, the distal part of the cell in particular strongly clouded and striated as far as a light terminal patch, the light transverse band behind it sharply defined proximally by the dark lunulate markings. In the distal area sometimes only a single eye-spot near the apex, the posterior one faintly indicated or likewise distinctly developed. The dark band-like median area of the hindwing, in which the eye-spots are placed, as a rule distinctly defined at both sides. In the distal area at least one sharply curved band composed of dense striation. Occasionally there is a small, light-pupilled accessory eye-spot or a brownish spot before the middle ocellus. A pronounced highland form from Pacho, East Cordillera, 2200 m., *pavo.* Colombia, western Venezuela. — **pavo** *Röb.* is a valley form; larger than *telamonius.* Ground-colour deep saffron to gold-yellow, the grey-brown costal area of the forewing somewhat deeper in tone; blue reflection *pavonides.* of the hindwing somewhat more restricted than in *telamonius.* Colombia, Venezuela. — **pavonides** *subsp. nov.* replaces *pavo Röb.* in eastern Colombia, is likewise a valley form and differs from Röber's cotypes in my collection in having the light area of the forewing pale yellow above, more suggesting *memnon memnon,* and in the distinct light blue reflection in the submarginal area. Under surface with the yellowish and whitish parts much more extended and the anal ocelli smaller than in West Colombian *pavo.* Taken by Fassl on the Upper Rio Negro at 800 m.

bellerophon. **C. bellerophon** *Stich.* (63 c) replaces *memnon* in Ecuador. The under surface apparently does not differ materially from *memnon,* but on the upperside *bellerophon* is distinguished at once from its northern representative by the deeper yellow, slightly greenish-tinged basal area of both wings and by having the distal part of the marginal region brown instead of black. Hitherto only known from Ecuador.

C. eurilochus is probably the best known species of the genus and the most widely distributed in collections. We are also fully acquainted with its habits and transformations. Larva on bananas and other *sulanus.* Musaceae. Occurs from Honduras to Santa Catharina and from Colombia to Bolivia. — **sulanus** *Fruhst.* (63 c), the most northerly branch, is extraordinarily rare in Guatemala and Honduras, but according to Godman and Salvin seems to occur in somewhat larger numbers in Nicaragua. ♂ grey, the basal half of the hindmarginal part of the forewing dusted with blue-grey, somewhat iridescent. Before the marginal area a yellowish band, which is anteriorly distinct and straight, towards the hindmargin washed-out. Distal margin of the forewing dull, dirty earth-brown. Spots near the apex present, but weakly or hardly dotted with white. Hindwing velvety black, finely margined with white, the basal half to ⅔ of the cell and of the inner margin with blue-green reflection. Beneath almost as *brasiliensis,* somewhat lighter grey than this and the striation finer; in the forewing mostly only one eye-spot, near the apex. The posterior ocellus on the hindwing very sharply expressed, the bordering almost saffron-yellow. ♀ dark grey, copiously tinged with blue, the markings of the under surface showing through strongly, the whole of the distal markings sometimes washed out and indistinctly clouded, in any case not so distinctly expressed as in *brasiliensis.* Central America. — In northern Colombia *sulanus* *galba.* is replaced by **galba** *Deyr.* The ♂ is similar but paler, the transverse band at the cell only quite weakly indicated by the pattern showing through from beneath, more weakly than in *sulanus.* The band near the distal margin is likewise dull and washed-out, only in the anterior part somewhat more distinct, never yellowish in tone, but pale grey-brown like the distal margin. Hindwing with stronger whitish dusting at the distal margin, the blue of the basal area not extending to the end of the cell. Under surface almost as in the preceding, the cell of the forewing somewhat more regularly watered, on its projecting angle less brown clouding and the light patch more weakly marked. Hindwing with the ground-colour white, the striation coarse, especially in the basal area. The posterior eye-spot very strongly marked, its ring very broad, light ochre-yellow, at the outer edge shaded with orange; the brown foreground less extended, light sepia, the transverse stripe running to the anterior eye-spot not always fully developed. ♀: band-markings on the forewing more distinct, almost as in *C. eurilochus brasiliensis,* but not so sharply defined, the blue tinge on the forewing less extended and duller, the costal margin in particular more broadly grey. The characters not quite constant, varying individually. *morpheus.* Size of the preceding. — **morpheus** *Stich.* inhabits Central Colombia; it is of very dusky, uniform, dark blue-grey colouring with the submarginal band only quite weakly indicated. Under surface coarsely and regularly watered, the large posterior ocellus only brown anteriorly. According to Stichel *morpheus* extends southwards *phryasus.* to Ecuador and Peru, where it unites with *livius Stgr.* — **phryasus** *Fruhst.* Very small in habitus, about agreeing with *sulanus Fruhst.* from Honduras, also similar to this race above in coloration, but easy to distinguish by the lighter blue, more inclining to grey, on the forewing, which, moreover, bears a short whitish band at the wall of the cell. Hindwing extremely characteristic by having the black distal area widened and encroaching on the cell. In the middle of the wing an intensively glossy dark blue reflection, which decreases towards the base. Under surface similar to *sulanus,* ocellus of the hindwing larger, more distinctly bordered with lighter yellow, placed *livius.* in a deeper brown foreground. Maracas Fall, Trinidad. Collected by A. H. Fassl. — **livius** *Stgr.* Usually larger than the typical form; forewing pale grey-brown, even paler than in the typical subspecies, distal area somewhat darker, particularly in the posterior part, there brownish or pale blackish and divided for its entire breadth from the rest of the wing by a vague yellowish transverse band, which anteriorly is mostly somewhat more distinctly expressed. The spots near the apex indistinct and washed out, distal margin somewhat lighter, before it some vague nebulous shading, enclosed by or adjoining the marginal lines which show through from beneath. The blue tinge in the posterior part of the wing is very faint, the green reflection at the costal margin and in the cell entirely absent. Hindwing with whitish fringes. The blue basal area leaves the anterior part of the cell free, is posteriorly extended only to one-half the submedian and shows only a slight sky-blue gloss. Under surface somewhat more uniformly and regularly striated, the pupil of the eye-spot at the anal angle commonly somewhat reduced, so that the eye-spot is very broadly ringed with yellowish. ♀: forewing almost smoke-brown, with very slight blue tinge. The spots near the apex more distinct, blackish, dotted with white internally; distal area somewhat darkened; near the distal margin runs a lighter transverse band of spots, strongly curved posteriorly. Between this and the margin itself, which is again somewhat lighter, is placed a smoke-brown stripe, distally straight, proximally strongly curved. There is no real transverse band behind the cell, only its commencement being indicated at the costal margin by a yellowish diffuse spot. Hindwing with the basal area quite faintly blue; the bluish tinge, however, extends to beyond the end of the cell and nearly to the hinder angle; before the posterior half of the cell, extending somewhat beyond its end, and in the median area of the wing some sparse ochre-yellowish dusting is sometimes perceptible. Distal area black, the margin slightly dusted with yellowish white. Under surface of the hindwing near the distal margin with two somewhat more distinct undulate bands. Markings on the underside of the forewing showing through above almost throughout. Western Amazons, Peru. According to Dr. HAHNEL *livius* is very shy of the light and remains hidden during the day in dark, shady places, possibly where rotting fruits have attracted it during its flight in the twilight. When disturbed their flight is jerky, the wings only flapping a little, and occasionally they settle in the dark, but nevertheless visible from far off, on a hanging liana. The whole under surface of the butterfly is then exposed, with the large brilliant yellow eye-spot showing up strikingly on the variegated grey hindwing, and giving the insect almost an aggressive appearance. The colouring is, however, thoroughly adapted to the grey of the twilight for the short half hour during which *livius* makes its appearance morning and evening. — **caesia** *Stich.* was described from Venezuela. Forewing suffused with light blue except for the *caesia.* rather intensively black distal-marginal part. Under surface densely striated. Round the large ocellus of the hindwing a deep dark brown patch. Strigulation in general finer than in *brasiliensis Fldr.* — **eurilochus** *Cr.*, *eurilochus.* the typical subspecies, is rather rare. Upper surface of the wings pale grey, the striation of the under surface showing through, sometimes with slightly brownish tone, distal area somewhat darker, anteriorly but little, posteriorly more distinctly differentiated from the rest of the wing, more rarely slightly blackish (rainy-season form ?), then at the boundary a lighter, washed-out, narrow transverse band, which touches the posterior angle of the cell, is anteriorly slightly tinged with yellowish and terminates vaguely at the middle median vein. In more uniformly coloured examples only a small, pale yellowish diffuse spot remains at the costal margin before the fork of the fourth and fifth subcostal veins. The small spots near the apex mostly only indistinct, without or with only very little white bordering. Surinam, Guiana. — **brasiliensis** *Fldr.* often attains *brasiliensis.* a huge size, but from Espiritu Santo to its southern limit (Sta. Catharina) it does not seem to vary, that is to say, to be separable locally. *brasiliensis* may be known at once by the prominent pure white subapical spots on the upperside of the forewing, which are not developed to the same extent in any other subspecies. Yet examples occur, particularly in Blumenau and Espiritu Santo, in which these spots are either entirely absent or only indicated. Blumenau ♂♂ have more copious white irroration in the distal area of the hindwing beneath, perhaps indicating an incipient race. At the same time a ♂ from Espiritu Santo is the melanotic extreme. This lacks not only all the whitish, but also the yellow-brown striation, in place of which a mealy powdering of the finest blackish scales is present (= **privata** *form. nov.*). In the submarginal area of both *privata.* wings there is a well developed longitudinal band of black colour and as the ocelli are also reduced and darkened one is tempted to think one has a separate species before one. Egg hemispherical, in the middle with an elevation somewhat like a girdle, beneath lighter and transversely grooved, attached to the underside of leaves. Larva cylindrical, tapering anteriorly and posteriorly. Head angled, sloping anteriorly, dirty white with black lines, when young with dense bristles, afterwards with 8 horns forming a short of crest. Body at first dirty white, later green with dark, anteriorly forked mediodorsal band containing red-brown spots; when full-grown the larva is dirty grey-yellow with darker-spotted dorsal line and irregular black lateral oblique stripes sloping down posteriorly. At the posterior margin of the 5th—8th segments are placed short, soft, conical protuberances up to. 4 mm. in height (false thorns); the tail is prolonged into a fork of about 9 mm. in length. Body up to 12 cm. long. As long as the larva is green (to the third moult) it rests on the underside of the banana leaves (according to SOMMERFELD gregariously), afterwards it hides on the stem among dry, hanging leaves, feeding chiefly at night. Pupa robust, broad, tapering posteriorly and anteriorly. Dorsal edge strongly projecting, wing-margins likewise strong, 6th—10th segments with short black bristles on the dorsum. Body brown-red, with black dots, black dorsal and lower lateral stripes and black lateral oblique bands, sloping down posteriorly. On the wing-case two silvery, brownish-margined spots, the abdomen only with one entirely free (movable) segment. The metamorphosis occupies 3—4 weeks. Brazil (Amazons and southwards), Argentina. — **pallidus** *Fruhst.* Bolivia produces a strongly differentiated *eurilochus* race, for which I propose the name *pallidus.* *pallidus.* It has more rounded wings than *eurilochus* and *livius* and the forewing is completely transparent, particularly towards the apex. The scaling in the cell is not blue but yellowish and the whole apical part of the forewing appears light brown, as the colour of the under surface shows through intensively above. The black marginal border is almost entirely suppressed, only remaining perceptible in the anal angle of the forewing, behind the 3rd median vein. The hindwing on the contrary is more broadly margined with black-brown and the brown colour extends even beyond the apex of the cell. The basal half of the hindwing is lighter, blue-grey. The under surface is at once distinguishable from *eurilochus* and *livius* by the yellowish brown instead of grey-white colouring. The anal angle of the forewing is not whitish but dark grey. The subapical ocellus of the forewing is much reduced and all the ocelli of the hindwing are also considerably smaller and more narrowly ringed with black outside. The large ocellus of the hindwing is not rounded but flat oval and more like a cat's than an owl's eye. Bolivia.

C. idomeneus is one of the most beautiful species of the genus, in habitus scarcely inferior to *eurilochus*, though it has narrower wings. It is even more susceptible to geographical influences than *eurilochus*, and splits up into a series of local races, mostly sharply differentiated, of which only three extend beyond central Brazil. Upper surface similar to *philinos*, but the forewing more pointed, with the submarginal band differing in the different races, sometimes pure white and strongly expressed, sometimes again darkened or absent. Under surface always with prominent white patches in the cell, particularly in the ♂♂ and a brilliant patch of white striation in the submarginal area of both wings. Hindwing always with round ocelli, *idomeneus.* margined with bright yellow and placed in a brown or yellow foreground. **idomeneus** *L.*, the name-type, inhabits Surinam, where my collector Julius Michaelis captured large numbers by means of banana-bait. All the examples before me bear a sharply defined white longitudinal band, terminating at the posterior median, on the forewing, which in the ♀ is considerably more weakly developed and is already lost at the middle median. ♀ beneath always more deeply coloured, more uniform than the ♂, also in the distal area of the hindwing *apollonidas.* predominantly striated with brown-yellow. — **apollonidas** *subsp. nov.* is only known to me at present in 2 ♂♂ from Obidas on the Middle Amazon, where Michaelis found it in August and September. ♂ easy to distinguish from *idomeneus* from Surinam by the purer white submarginal band of the forewing, which is not sharply defined but extending into the apex of the cell and there gradually lost. The black submarginal area of the hindwing narrower than in the name-type, hence the cell in particular more broadly tinged distally with ultramarine blue. Under surface of the hindwing without a definite brown anteterminal area, eye-spots larger, *euphorbus.* bordered with paler yellow. — **euphorbus** *Fldr.* was lost for a long time, but was rediscovered by Dr. Koch-Grünberg and I have recently obtained examples also from the probable original locality, the Colombian part of the upper Rio Negro. *euphorbus* is a poorly coloured, dusky local form with the band of the forewing washed out and the blue on the upper surface deeper and almost without gloss. Under surface very variable according to the locality. One ♀ is predominantly dull smoke-brown, with only a slightly lighter transcellular patch on the hindwing. The ♀ from Colombia (upper Rio Negro) on the contrary is distinguished by a broad, band-like, nearly white median area and still more by the submarginal pointed marks, which are proximally white but otherwise filled in with light brown. The Colombian ♂ also is much darkened above, the longitudinal band of the forewing costally yellowish, otherwise grey, and as narrow as in *idomenides Fruhst.* *stratonides.* For the latter local race I would propose the name **stratonides** *subsp. nov.* — **marsus** *Stich.* is a subordinate *marsus.* form, deeper-coloured and more strongly shot with blue, about as in the form *euphorbus*. Whitish band on the forewing narrowed; costal and basal areas of the forewing with greenish gloss when viewed from in front. Ground-colour to the end of the cell and the blackish marginal area blue-violet, slightly tinged with greenish. Hindwing to the end of the cell with faint blue-green gloss, thence deep sky-blue; the distal margin, however, remains quite narrowly black and is slightly dusted with whitish particularly behind the apex. The deep blue reflection extends anteriorly almost to the costal margin, only proximally leaving a blackish grey silky area. Hindmarginal area dirty yellow. Under surface with the characteristic glaring ochre-yellow colour in the posterior area, communicating itself to the bordering of the posterior eye-spot, so that the ring of the eye-spot is lost in the yellow area. The ground-colour behind the cell chiefly white and only very sparingly striated. *idomenides.* Pará; also in other localities together with the type-form. — **idomenides** *Fruhst.* Similar to the preceding form, wings somewhat narrower, some of the examples smaller, ground-colour sometimes paler. Band of the forewing in the ♂ narrowed, only visible in whitish colouring to close to the upper median vein. The blue basal area of the hindwing reduced, in an oblique light always greenish, a narrow stripe with a deep blue gloss bounding it distally; the reflection only reaches to half the cell and is also posteriorly broadly separated from the blue colouring of the distal margin or sometimes diffused along the posterior median vein as a deep blue tone to the hinder angle. Distal margin slightly dusted with whitish; ♀ scarcely differing above except in the reduction of the blue basal area on the hindwing; it extends here only about to the end of the cell, the *hippolochus.* whitish band of the forewing terminates indefinitely at the anterior median vein. Peru. — **hippolochus** *subsp. nov.* The whitish longitudinal band of the forewing somewhat narrower, sharper than in *idomenides* from Peru; under surface lighter, all the whitish parts broader, submarginal area of the hindwing nearly pure white, almost without striation, the submarginal band of red-brown pointed curves which in *idomenides* extends distinctly almost to the terminal border absent. Ocelli ringed with lighter yellow and then more broadly with black. *superba.* Coroico, 1200 m., Bolivia. — **superba** *Stgr.* Apex of the forewing rather sharp, somewhat produced. Ground-colour suffused with blackish, transverse band pure white, sharply defined, anteriorly slightly curved, posteriorly ending in a point beyond the posterior median vein. Hindwing to the end of the cell with blue-grey basal area, which in an oblique light shows a greenish, at the distal edge a deep blue gloss; from here onwards to the distal margin a sky-blue reflection is visible in an oblique light, only leaving a more or less large spot at the apex. Distal margin of the hindwing strongly dentate, slightly and narrowly dusted with whitish. Under surface marked and coloured as in typical *idomeneus* but more sharply; the posterior eye-spot of the hindwing comparatively small and narrowly ringed, the white area behind the cell rather strikingly contrasted with the about equally broad brownish distal area. Southern Peru. — *praecana.* **praecana** *Stich.* is a form of the preceding. Shape about as in typical *idomeneus* or *agamemnon* with the distal margin of both wings strongly undulate, wings less broad, as large as *superba*. Above clearer grey, even paler, than typical *idomenides*, markings of the under surface showing through distinctly. Band of the forewing narrow, about as in *idomeneus*, the blue reflection extended, but scarcely more than in *idomeneus* itself and on the hindwing not very brilliant. Distal part of the hindwing black-brown. Under surface about as in *idomeneus*, but all the dark parts lighter brown. Ground-colour reddish ochre, the double line before the distal margin of the forewing more strongly dentate. On the hindwing the light areas before and behind the brown median band lighter, hindmargin as far as the submedian ochre-yellow, which colour is extended in the anal area and united with the bordering of the posterior ocellus. The under surface recalls *rhoetus*, but is even lighter and more yellow. South Peru. — *agamemnon.* **agamemnon** *Weym.* is the largest race. Apex of the forewing almost falcate, distal margin below it deeply excised, undulate. Ground-colour dark, nearly black, but the markings of the under surface showing through faintly, particularly in the cell and at the distal margin. Band of the forewing widened, pure white for its entire breadth as far as the posterior median vein, beyond this distally whitish nearly to the submedian, proximally dusted with bluish. Transverse band anteriorly somewhat narrower, somewhat dentate, the sections between the veins arranged as a series of crescentic or arcuate spots. Posteriorly these arcuate spots become shallower, the band more continuous and only finely intersected with blackish at the veins. Not far from the costal margin, near the apex, there is a small white spot and sometimes a second following it. Hindwing somewhat elongated, at the distal margin extremely dentate, projecting almost in points at the extremities of the veins. Basal area grey-blue to near the end of the cell, in an oblique light greenish, distally with blue reflection. Distal margin itself slightly dusted with whitish. Under surface extremely light, but marked in the same way as in *idomeneus*. The transverse band of the forewing, however, much broader, the dark shading which continues the brown colouring in the median area behind the posterior median vein condensed into a more distinct band, the lines near the distal margin more strongly dentate, the proximal bordered with whitish and towards the adjacent brownish area shaded with black-brown, so that it loses the effect of a separate line and forms a sinuous boundary to the adjacent part of the wing. Hindwing traversed by a complete brown median band; the posterior eye-spot, however, the greater part of which is enclosed in the band, smaller than in typical *idomeneus*. The area behind the cell very distinctly separated from the distal area proper by the white-edged, strongly dentate, band-like marking halfway between the end of the cell and the margin; ground-colour of the distal area anteriorly chestnut-brown, posteriorly only brown along the veins, otherwise whitish. The white patch in the middle of the cell sharply defined. Ecuador (Huamboya, Balzapamba). — *rhoetus.* **rhoetus** *Stgr.* In the ♂ the white band of the forewing is narrower and shorter, at most only distinct to the 2nd median vein; the blue reflection on the hindwing interrupted in the median area. Anal area ochre-yellow, beneath the entire posterior part of the wing as far as the posterior ocellus bright ochre- or saffron-yellow; the under surface is more brightly marked than in typical *idomeneus*, particularly the whitish cell-patch mostly sharp and the transverse bands in the cell of the forewing purer whitish and sharper. ♀ the same but paler. Eastern Amazon and part of Brazil lying to the south of this; Argentina (?). I have *rhoetus* before me also from Matto Grosso, a single ♂ differing inconsiderably from Staudinger's type, which I had the opportunity of seeing in the museum at Berlin a year ago. — Two further adjacent geographical races may be separated: namely *ibykus.* **ibykus** *Fruhst.*, which agrees with the Matto Grosso form in its relatively small size and the scarcely produced apex of the forewing. In *ibykus*, however, the anal and basal part of the hindwing beneath a duller, deader shade of yellow. White band of the forewing resembling that of *idomeneus* from Surinam. Minas Geraes; described from 2 ♂♂ and 1 ♀ in coll. Fruhstorfer. — *ariphron.* **ariphron** *Fruhst.* The white band of the forewing much resembles that of *euphorbus*, but stands out somewhat more distinctly in the ♂ and is much reduced in the ♀ but still always somewhat less darkened than in the ♀ of *euphorbus*. Forewing of the ♂♂ with the apical part much produced, the longitudinal band, compared with *ibykus*, scarcely half as broad in spite of its larger size. Under surface, in accordance with its more southerly habitat, with the yellow basal tinge on the hindwing almost entirely suppressed and the forewing essentially darkened. Espiritu Santo, from 2 ♂♂ and 3 ♀♀ in my collection.

menoetius. **C. menoetius** *Stgr.* is a rare, very interesting species, nearly allied to *idomeneus*, which has led the monographer of the Brassolids to confuse it with the latter and erroneously to call it *euphorbus Fldr.* There is an excellent figure by Stoll in the fourth part of Cramer's celebrated work as long ago as 1782, on pl. 390. Stoll, however, originated the mistake, as he represents a ♂, but calls it *idomeneus* ♀. Staudinger has quite correctly observed and pointed out that *menoetius* differs from other *Caligo* in the strikingly narrow hindwing. Upper surface uniform dark ultramarine, in the ♂ without a trace of a band, only with broad, pale submarginal area showing through faintly from the under surface. The still undescribed ♀, of which there are four examples in my collection, is round-winged, larger than the ♂, lighter blue with brownish white submarginal area on the forewing. Both sexes with the black distal margin of the hindwing scarcely half as broad as in *idomeneus*. Under surface recognizable by the more vividly contrasted colours: thus both wings are traversed by a more compact dark brown median area, in which are placed the somewhat larger and more distinctly black-ringed ocelli. Forewing with very broad black intramedian spot beyond the cell-wall and essentially more pronounced black zigzag stripes in the cell itself. Both wings then bordered distally with deeper brown and blackish. If it is further added that the median area of the hindwing stands out more sharply whitish than in *idomeneus*, all those differential characters have been mentioned which Stoll's figure reproduces so unmistakably. *aristophanes.* Surinam, also found by Dr. Hahnel at Maues on the Lower Amazon. — **aristophanes** *subsp. nov.* is smaller than *menoetius* from Surinam and the upper surface may be at once known by a rather broad yellowish longitudinal band, suggesting *idomeneus*, which extends as far as the middle median. This band, however, is always weaker than in *euphorbus* and *stratonides*. But where *aristophanes* surpasses *menoetius* is in the still more glossy, purer, brilliantly iridescent blue of the hindwing. Under surface easy to distinguish by the lighter grey-brown submarginal areas on the forewing and by a row of brown pointed curves which are wanting in *menoetius*. Coroico, 1200 m., Bolivia. Only known to me in one ♂ in coll. Fassl.

C. atreus is perhaps the largest species of the genus and at the same time the most gaily coloured. Forewing black with a blue-violet median area, which is traversed by a whitish stripe varying in distinctness according to the local race. Hindwing with broad light yellow or orange band, again of greater or less breadth and with the margins more or less incised in the different local forms. Under surface brilliant red-brown with yellow *atreus.* or orange distal area. Apical ocellus of the hindwing very large. Five well separated geographical races: **atreus** *Koll.* In the ♂ the blue-violet dusting of the hindwing viewed from above weak, in an oblique light somewhat more distinct; in it an oblique light band, anteriorly only indicated by thin, short whitish yellow hairs and scattered light scales, gradually becoming more distinct posteriorly and about from the lower angle of the cell onwards grey-white slightly dusted with bluish, changing towards the anal angle into almost pure white. Boundary of this band not sharp, dusted with grey and bluish, and gradually shading into the adjoining ground-colour. Distal area light smoke-brown. In this is sometimes placed a nebulous, slightly undulate, dark stripe, separating another, lighter, band-like stripe from the distal margin; the latter stripe again is proximally bounded by the corresponding, more sharply dentate second marginal line of the under surface. Sometimes the dark stripe is absent or very much weakened. Band of the hindwing light ochre- to saffron-yellow, anteriorly whitish, proximally not sharply defined and on the veins and between them subdentate. The band terminates about at the extremity of the posterior median vein or somewhat before it. ♀ with broader wings, the median area of the forewing suffused with lighter blue, the transverse band mostly somewhat more distinct, the marginal band of the hindwing broader, pale ochre-yellow, anteriorly more strongly whitish. Under surface lighter, the *dionysos.* markings somewhat weaker. Colombia. — **dionysos** *subsp. nov.* differs from *atreus* in having the band of the forewing continued to the costal margin and almost uniformly whitish, dusted with blue-violet, in which this form approaches its next representative, *ajax*. On the hindwing the orange distal area remains darker, reaches the black distal border and becomes broader (transition to *C. uranus*). Under surface with more pronounced contrasts in colour, the white stripe of the forewing more sharply defined and especially proximally straighter, apical ocellus of the forewing larger, anal ocellus of the hindwing considerably smaller, median area of the *uranus.* hindwing deeper brown, conspicuously margined with black distally. Chiriqui (coll. Fruhstorfer). — **uranus** *H.-Schäff.* is the northern representative of *atreus* and strictly speaking only a geographical race of this widely distributed species. It seems, however, not inconceivable that it might form a separate species on account of its small size, more rounded wings, the absence of the black distal border of the hindwing and the presence of larger white subapical patches on the forewing. The under surface on the contrary can only be distinguished from *atreus* by the smaller eye-spots on the hindwing. I have examples before me from Honduras, where *uranus* occurs very rarely; to the north southern Mexico forms the limit of its range and according to Godman it is not very rare in Guatemala, where it inhabits the dense woods; when startled up it flies a short distance and *ajax.* then hides on the tree-trunks. — **ajax** *Westw.* has the band of the forewing broader and more distinct; at its commencement at the costal margin this is whitish grey with bluish dusting, but gradually changes to a pure white colour. In the middle median cellule the band is as a rule only slightly dusted with blue, the blue scales are there placed at both sides on the edges and finally disappear entirely. Band of the hindwing darker saffron-yellow, in an oblique light with a quite faint purple-red or violet hue, posteriorly strongly bent in a point to- *dentina.* wards the hinder angle. Venezuela. — **dentina** *Druce* has the band of the hindwing almost continuous for its entire length, only anteriorly broken up into spots, at the proximal edge deeply dentate. Peru, Ecuador (Chimbo, *agesilaus.* Balzapamba), Colombia (Rio San Juan). — **agesilaus** *Druce* has the forewing as in *dentina*, but the light transverse band somewhat more distinct. In the distal marginal area the blackish nebulous stripe likewise more distinct, so that the proximally adjoining light part near the margin is defined as a dentate band. Band of the hindwing broken up into five separate spots, which are rather remote from the distal margin and of which the posterior ones, and occasionally also the anterior, are loosely connected by a slight dusting. Their colour is yellowish white, the posterior ones somewhat darker. The blackish marginal dusting extends to the middle median vein and is united at the veins with the black-brown ground-colour of the rest of the wings. The anterior marginal spots are heart-shaped, being proximally incised in the middle, the posterior ones elongate. Fringes whitish yellow, standing out conspicuously against the marginal dusting. Under surface as in *dentina*, except that the posterior eye-spot of the hindwing is comparatively very large, the distal area for its entire length marpled and striated with whitish and blackish, and only a narrow stripe near the distal margin, corresponding in position to the row of spots on the upperside, is more uniform whitish. The cell-patch and the elongate ring-spot before the middle discocellular are distinct. ♀ like the ♂, but in general paler. Perhaps only a seasonal form, as transitions occur to the preceding subspecies. Ecuador, Colombia (Valley of the Rio Dagua).

C. arisbe *Hbn.* (65 a), so far as is known, inhabits only the three Brazilian states of São Paulo, Rio de Janeiro and Espiritu Santo. I have no examples from the two former, but in Espiritu Santo Michaelis has baited and captured *arisbe* sparingly with bananas. The larva lives on Marantaceae. Under surface predominantly yellow-brown with the median area much lighter yellowish, particularly in the ♀. Anal ocelli strikingly broad, first yellowish, then olive-coloured, finally ringed with black, connected with one another by an extended, distinctly defined brown area. *arisbe.*

C. oberthueri *Deyr.* is near to *arisbe* and must be regarded as one of the most beautiful Caligos. Upper surface of the forewing dark brown-grey, that of the hindwing brown-black, the latter except at the distal border with violet-blue reflections. Under surface dark black-brown with a conspicuous pure white longitudinal band. Ocelli on the underside unusually small. Colombia, Ecuador, very rare. — **phokilides** *subsp. nov.* inhabits Peru (Chanchamayo) and differs from Colombian examples in having a more indistinct, lighter yellowish longitudinal stripe on the forewing. ♀ lighter, the markings in the distal area more distinct. It bears there a partially blurred undulate line, followed proximally, near the margin of the wing, by a sinuous and dentate band. In the anterior part of this are placed near the apex three blackish spots, proximally edged with whitish, one behind another, accompanied posteriorly by two further more shadowy spots. The band behind the cell is more distinctly defined, almost ochre-yellow, anteriorly widened and shading into the ground-colour without any sharp demarcation. Hindwing with less of the blue gloss, faintly shot with violet, the light transverse band-like patch paler and broader, in particular anteriorly; the distal margin more broadly dusted with ochreous. Under surface as in the ♂, but lighter. The egg of this rare species is only half the size of that of *epimetheus* and even smaller than that of *Opsiphanes bogotanus*. It is of a wax-yellow colour with longitudinal ribs, base and apex somewhat flattened and smooth. Larva much darker than that of the preceding species, nearly black; the dorsal markings consist of several irregular light brown spots; the dorsal (false) thorns are black and bent somewhat forwards. Crest on the head and tail-fork much shorter than in *epimetheus*. The food-plant is a low species of palm with primitive, nonfeathery leaves. The larvae seem mostly to occur in pairs. Fassl observed *oberthueri* only on the crest of the West Cordillera above 2000 m., whilst *epimetheus*, although also a mountain butterfly, only occurs lower (from 1400 to 1800 m.); this also fully corresponds with the localities of the food-plants of the two species. *oberthueri.* *phokilides.*

C. martia *Godt.* (65 b) occurs where *arisbe* disappears and has hitherto only been brought to Europe from Santa Catharina and Rio Grande do Sul. Probably, however, the species also occurs in the state of Paranâ, which unfortunately has only been insufficiently explored. An example in my collection, which I received from Herr Julius Arp as coming from Rio de Janeiro, shows somewhat smaller anal ocelli on the underside of the hindwing, but the locality is not quite certain, especially as Herr Arp has obtained much material from Sante Catharina. *martia* is the rarest south Brazilian *Caligo*; it always only occurs singly and extremely seldom comes to baits of fruit. But it is found with great regularity on the highland of Lages near the sources of the Uruguay at bleeding trees, where the butterflies feed greedily, but are nevertheless very shy, so that it is not easy to take them off their guard. The larva was apparently first described by Mabilde. It is green with yellowish lateral stripes. Head with two short protuberances and two long setiferous horns, dorsum with five false thorns, hairs small, quite fine, tail with the customary double point. Pupa dark havanna-brown. Head slightly pointed, abdomen elongated, middle part thickened, and with four transverse stripes. From September to October. Pupal stage 20—25 days. ♂ smaller than the ♀, which we figure, and wanting the transparent submarginal band of the forewing, under surface with a nebulous, black-bordered spot in the cell of the forewing, which no other *Caligo* species possesses to the same extent. Behind the cell three unequal white intramedian patches. Apical ocellus of the forewing relatively large. Anal ocellus of the hindwing much as in *arisbe*, black with broad yellow bordering which posteriorly shades into greenish. In the cell of the hindwing an elongate irregular spot, which is very variable, hardly alike in two examples, in the somewhat lighter ♂♂ and ♀♀ from Rio Grande do Sul better developed than in Santa Catharina examples. *martia.*

8. Genus: **Narope** *Westw.*

In this the smallest Brassolid genus we have at the same time reached also the most considerable deviation from the type in shape and neuration, and indeed the species more resemble an *Anaea* than a Brassolid in their smaller size, the sharply pointed forewing, the short teeth at the medians in the hindwing, and in having the upper surface mostly uniform brown and the under surface entirely without eye-spots and variously irrorated; yet all other points of structure, such as palpi, forelegs and the large precostal cell, agree completely with the family characters, while the discovery of the larva by Dr. W. Müller has removed all doubt as to the position of *Narope*. The genus differs at once from all the others in the 3rd subcostal vein running into the apex and the fork of the 4th and 5th into the distal margin below the apex. This striking neuration occurs extremely rarely even among the Satyrids and is more a character of the Nymphalids. In addition *Narope* is distinguished by further characters. The subcostal vein is not constant in the separate species, but both 4- and 5-branched; the 1st branch is either entirely wanting or in part coincident with the costal. The upper discocellular is short, but distinctly present; the middle straight, in the same direction and of the same length as the lower, which is only weakly curved, closes the cell obliquely and meets the median vein at a somewhat greater distance from the 2nd branch than this is removed from the 1st. The submedian of the forewing is strongly sinuous in the ♂, this formation being closely associated with the presence of a tuft in the ♂ (as sexual character) on the under surface beneath this vein; with the hair-tuft corresponds a shiny spot at the costal margin on the upperside of the hindwing. The precostal cell is extraordinarily large and well developed; the precostal vein simple, nearly straight, proximally directed. The cell is obliquely closed by a rather short and straight lower discocellular. Head large, eyes naked, palpus flat, densely scaled and haired; first joint short, second about 4 times as long, terminal joint short, pointed, extending beyond the head. Antenna moderately long with the club gradually thickened. Thorax strong, densely haired; legs strong, abdomen short, pointed. Forewing with strongly curved costa and prominent, pointed apex. Distal and inner margins in the ♂ nearly straight, anal angle sharp. The under surface mostly bears a scent-spot and hair-pencil. Uncus with the processes short and divergent, i. e. with the points directed outwards. Valve simple, with two strong teeth. Hindwing often slightly angled. Cell of the forewing broad at the end, more than half the length of the wing. This genus contains the smallest species of the family; they are uniformly coloured, the under surface resembling leaves; they come to light and are also observed on bait at night. — Larva on bamboo, feeding by night, its general appearance like that of the other Brassolid larvae. Head with 3 pairs of horns, end of the body with tail-fork. — Pupa compact, ventrally compressed, with short tubercles and two horns on the head, suspended, with one free segment. South and Central America (from Paraguay to Guiana on one side, from Bolivia to Mexico on the other).

Hindwing more or less distinctly produced at the distal margin.

N. cyllastros is the commonest and best known species of the genus and is at the same time the only *testacea.* one which extends northwards beyond Colombia and of which the early stages are known. — In **testacea** *Godm. & Salv.* the ♂ is rust-red above, apex of the forewing and basal half of the hindwing darkened with brownish. Distal margin of the latter wing only feebly angled at the middle median vein. Under surface pale ochreous with scattered darker small spots, striae and shading, the whitish spots of the hindwing apparently always absent with the exception of the anterior ones. ♀ with the hindwing more strongly angled; upper surface of the *stygius.* wings dark brown or smoke-brown. Panama (Chiriqui). Very rare, only a few examples yet found. — **stygius** *Stgr.*, from Fonteboa on the Upper Amazon, was erected on a ♀ received from Dr. Hahnel. Smaller, with the general colouring even darker than in *cyllastros* (62 d), under surface somewhat less intermixed with whitish grey. Hindwing with seven yellowish anteterminal dots, of which the first is distinctly oval and ringed with *cyllastros.* black, whilst the sixth is the strongest. — **cyllastros** *Westw.* (= cyllene *Fldr.*), probably described from examples from Rio de Janeiro, is considerably darker in the ♂ above than the original of our figure (62 d) (which came from Santa Catharina) and beneath as pale as the ♀ figured from Santa Catharina; a difference which is already mentioned by Staudinger in his „Exotische Tagfalter" 1888, p. 218. In the course of two years I took only a few examples near Theresopolis, Sta. Catharina, and I have ♀♀ before me from Blumenau. According to Bönninghausen very rare in shady places near Rio de Janeiro. Taken by me at banana bait. Dr. Wilhelm Müller found the larva feeding at night on bamboo, it was already in the fifth stage and a few days before pupation was 7.5 cm. in length, inclusive of the tail-fork, which was 6 mm. Head with three pairs of horns obliquely directed posteriorly, arranged like a collar, body thickened towards the middle, otherwise slender, the horns and the tail-fork laterally compressed, the two parts of the tail arising far apart, but running parallel; head brown with a black spot in the middle below the horns, which sends out two stripes to the base of the horns and two to the lower angles of the head. Body a mixture of pale red and grey-brown. The pale red colour is somewhat irregularly arranged and forms undulate lines. Pupa rather stout, the posterior segments dorsally rounded with a slight central ridge, which is divided into three humps, in addition two further protuberances at the base of the wings and two horns. The wing-margins are indistinct. The markings present a peculiar mixture of yellow, brown and black; here and there, especially on the dorsum, there are some white spots.

cyllarus. **N. cyllarus** *Westw.* (62 d) with the type from the state of Rio de Janeiro, where the species occurs very rarely in the Organ Mountains. Michaelis discovered it in Espiritu Santo, I myself found it in Santa Catharina. One ♂ in my collection is said to come from Rio Grande do Sul and Stichel names São Paulo as a further locality. ♂: head and eyes uniformly reddish brown. Venter and legs pale ochre-yellow. Upper surface reddish brown, of lighter or darker tone, basal and apical areas somewhat duller. At the end of the cell, on the lower discocellular and again not far from the distal margin between the radials there is a small black-brown spot, the last-named sometimes indistinct or absent. Distal margin darkened, with a narrow blackish undulate band, not sharply defined. Under surface pale ochre-yellow, very variegated, irregularly marbled with darker and whitish shades. At the costal margin, in the cell and in the distal marginal area dotted with dark brown, then with two more or less distinct dark transverse bands; apex dusted with whitish, at the turned-up part of the hindmargin an anteriorly directed light hair-tuft, covering an anal scent-spot. Hindwing with the distal margin angled at the second median vein; colouring as in the forewing, at the end of the cell darker spotted, anal area lighter, a scent-spot at the middle of the costa. Under surface lighter with dark transverse band; distal area darker with submarginal undulate band. In the ♀ the distal marginal band is more sharply defined, general colouring somewhat paler. South Brazil (Sta. Catharina, São Paulo, Espiritu Santo).

sarastro. **N. sarastro** *Stgr.* Head dull ochre-yellow, upperside of the abdomen and thorax red-brown, underside and legs ochre-yellow. Forewing with scent-spot and pencil as in the preceding species; shape of the wings similar, but the apex of the forewing more pointed, more projecting. Upper surface red-brown, apex and distal margin blackish. Under surface almost ochre-brown, with darker spots and striation, especially at the costa. Cell crossed by two diffuse, darker bands. A triangular darker marginal area in the distal third of the wing is bounded by a light stripe, running from the apex towards the middle of the inner margin. Hindwing unicolorous with very dull submarginal band which is darker at the apex. Under surface with 3 diffuse, darker parallel bands, running from the costal margin in a slight curve to the inner margin. ♀ dark brown, distal margin narrowly reddish brown, apex of the forewing strongly produced; starting from the costal margin an elongate diffuse reddish brown spot, which is bag-shaped and rounded off near the distal margin below the apex. Under surface light grey-brown, irregularly irrorated and dotted. In the apical area dusted with whitish, from there obliquely towards the hindmargin a darker, distally dirty white nebulous band, much as in the ♂. In the fork of the 4th and 5th subcostal veins and also below the latter a small whitish spot, behind it a small blackish spot, slightly white-pupilled, then again a small white dot. Hindwing with the distal margin lighter, not sharply defined. This shade is widened posteriorly and anteriorly runs out on the veins. Under surface coloured like the forewing, indistinctly clouded with darker, near the middle of the costal margin a dark dot surrounded by a lighter area, accompanied posteriorly by a row of spots parallel with the distal margin, the first two are mere rounded spots of a lighter shade, while those which follow form elongate whitish patches. Colombia, Rio Agnaca Valley, about 2000 m., Upper Rio Negro at about 800 m., taken by Fassl. — *disyllus.* **disyllus** *subsp. nov.* is a smaller form, mainly grey-brown instead of reddish ochreous, the apical border of the forewing duller grey instead of black, the terminal band of the hindwing washed out, the yellowish patch in the cell and along the costal of the forewing in more vivid contrast to the grey median part. Under surface darker, more copiously banded with red-brown and with deeper purple gloss. Huancabamba, 1500 m., Peru.

anartes. **N. anartes** *Hew.* Forewing in the ♂ forming a right-angled triangle, costal margin curved, apex rectangular, sometimes produced into a slight point, distal margin nearly straight. Hindmargin straight, from the base outwards somewhat folded over for a third of its length. Upper surface lighter or darker rust-brown. Apex broadly blackish. Under surface pale ochre-yellow, with the exception of the hindmarginal area spotted and clouded with black-brown. Across the cell run 2 dark, irregularly defined bands. Before the apex close to the costal margin a small white spot, the apex itself dusted with whitish. At the folded part of the hindmargin a light brown hair-tuft, covering an oval yellow scent-spot. Hindwing smoke-brown, distal margin with undulate boundary-line, relieved with rust-brown. Under surface brown, clouded, spotted and watered with lighter and darker; a dark band from the middle of the costa obliquely across the cell to the submedian. Median area sometimes posteriorly dark shaded and bordered with whitish, and containing an undulated row of spots parallel with the distal margin. The spot in the lower median cellule always somewhat larger and more distinct, mostly elongate or reniform. Close to the uniformly brown distal margin is placed a blackish undulate line, the margin itself is more or less undulate and at the middle median vein more or less strongly angled. The colouring, particularly beneath, of varying sharpness, the under surface sometimes with very diversified marbling. Bolivia. — *syllabus.* **syllabus** *Stgr.* is the somewhat larger race from Chanchamayo in Peru.

Distal margin of the hindwing in the ♂ fully rounded.

nesope. **N. nesope** *Hew.* Forewing triangular, apex sharply rectangular, distal margin anteriorly straight, posteriorly slightly convex; hinder angle smoothly rounded, hindmargin straight, near the middle narrowly turned up. Upper surface red-brown, basal area behind the cell grey-brown, gradually becoming dusted with velvety blackish; under surface reddish brown, clouded and marbled with darker. Near the base and across the end of the cell a dark brown band, the latter broadest at the costal margin; in the costal area a small white spot. At the apex whitish dusting and near it three small black dots. Hindwing almost oval. Distal margin without appreciable angle, but the hinder angle rather prominent. Upper surface grey-brown with faint rust-red tone, distal margin somewhat lighter, red-brown; costal margin light brown, a bare friction-area with small yellowish pilose spot before the subcostal blackish. — Under surface brown, near the base darker, further posteriorly with three reddish spots. From the costal margin to the anal angle runs a dark brown band, behind the middle distally bordered with whitish, and beyond the cell an undulate row of small black spots, of which the two nearest to the hinder angle are dotted with white. Ecuador.

cyllabarus. **N. cyllabarus** *Westw.* Apex of the forewing rather pointed, distal margin slightly convex. Upper surface rust-brown or fox-red, towards the distal margin somewhat darkened; the latter itself pale brown, the dark tone thus forming a vague band. Before the anterior median vein near the distal margin a black, white-pupilled spot. Under surface ochre-yellow, spotted and marbled with brown, but not sharply. From the costal 2 diffuse transverse bands across the cell; from the whitish apex an oblique, diffuse nebulous band runs towards the middle of the inner margin. A black dot in the distal part of the cell and another between the radials before the distal margin. Hindwing likewise rust-brown with distinctly defined dark submarginal band. Under surface pale brown, costa striated, in the middle of the costal area a dark, white-pupilled spot; the rest of the wing indistinctly spotted and marbled with darker; across the middle of the wing a diffuse dark oblique band. Scent-spot as in the preceding species. Cayenne, Colombia, Amazons, Bolivia.

panniculus. **N. panniculus** *Stich.* ♂: head, palpus, antenna, body and upper surface of the wings smoke-brown, in specimens from Bolivia darker, nearly blackish. Forewing right-angled-triangular, costal margin curved, apex sharp, almost rectangular, distal margin fairly straight, hinder angle rounded-rectangular, hindmargin straight, about in the middle somewhat folded. In the posterior part of the median area a large, rounded, velvety spot of darker colour; this is placed proximally to the cell, its anterior extremity nearly touches the upper median vein, distally it remains about 5 mm. from the margin of the wing and posteriorly it extends beyond the submedian but with its boundary not sharply defined. Under surface lighter, irregularly spotted. Base darker shaded, then 2 abbreviated nebulous bands across the cell, in the apical area a small white spot; scent-organ as in the preceding. Hindwing above unicolorous with light oval scent-spot. Under surface lighter, slightly sprinkled with brownish, with indistinctly defined nebulous band beyond the cell; beyond the middle of the costa a small white dot. Paraguay, Bolivia (Rio Yuntas). 1 ♂ from Matto Grosso in coll. Fruhstorfer is smaller than Paraguay ♂♂, paler grey-brown, beneath light earth-coloured, hindwing with large liver-like intramedian ocellus, broadly filled in with white.

Hindwing of the ♂ above without scent-spot, but with a small hair-pencil arising in the cell and partially concealed in a pouch-like fold.

albopunctum. **N. albopunctum** *Stich.* Head and body smoke-brown above, whitish grey-brown beneath. Wings dark smoke-brown above, without markings except a small, pure white spot in the apical area behind the fifth subcostal vein, near the distal margin. Under surface marbled and shaded with lighter and darker brown. Costal margin dark, with short whitish striation. Starting from it two dark, irregularly defined transverse bands, one across the cell, terminating at the median; at the margin near the base a thin, anteriorly directed hair-tuft without scent-scale spot. Hindwing about triangular, with convex margins. Costal margin somewhat less convex, apex rounded, distal margin curved, slightly undulate, at the anterior median vein obtusely angled. Hinder angle obtuse. Upper surface without markings, hindmarginal area more thinly scaled, pale grey-brown, in the cell and along the submedian long brown hairs. On the wall of the cell, before the origin of the posterior median vein, a small hair-pencil, extending beyond the median, and partially concealed in a pouch-like fold on the lower median. Under surface brownish, strongly watered and dotted with whitish, particularly in the proximal half, which is sharply bounded by a narrow brown stripe running obliquely from the distal part of the costal margin to the distal quarter of the hindmargin. In the distal part of the wing an undulated row of black-brown, lighter-bordered dots, about halfway between the end of the cell and the margin of the wings; the first dot sometimes with white centre. Then follows a vague chain of dark spots similarly arranged and afterwards copious whitish marbling, the distal margin narrowly brown. Length of the forewing 28 mm. Peru (Marcapata).

Addenda.

fruhstorferi. P. 293. *Opsiphanes* **fruhstorferi** *Röb.* (63 a) should be inserted before *sulcius.* Black-brown above, the forewing with white oblique band, broken in its posterior part, arising in the middle of the costa and terminating in a narrow point before the distal margin at the posterior median vein. In the apex of the forewing 3 small white spots, hindwing with lighter, irregular, broad submarginal line. Under surface brownish grey, uniformly striated, with 2 larger, and between them 2 smaller ocelli. ♀ similar, larger, the apical spots of the forewing and the submarginal line of the hindwing more distinct. South Brazil: Sta. Catharina, Lages. Very local; I found it only at the sources of the Uruguay, where the water-courses traverse those wooded places which occupy the valleys of the Campos. The butterflies fly near the ground and regularly frequent the sap exuding from small trees, at which they feed for hours. Time of flight the end of December to February and March.

Alphabetical List

with reference to the original descriptions of the forms of the American *Brassolidae.*

* signifies that the form is also figured at the place cited.

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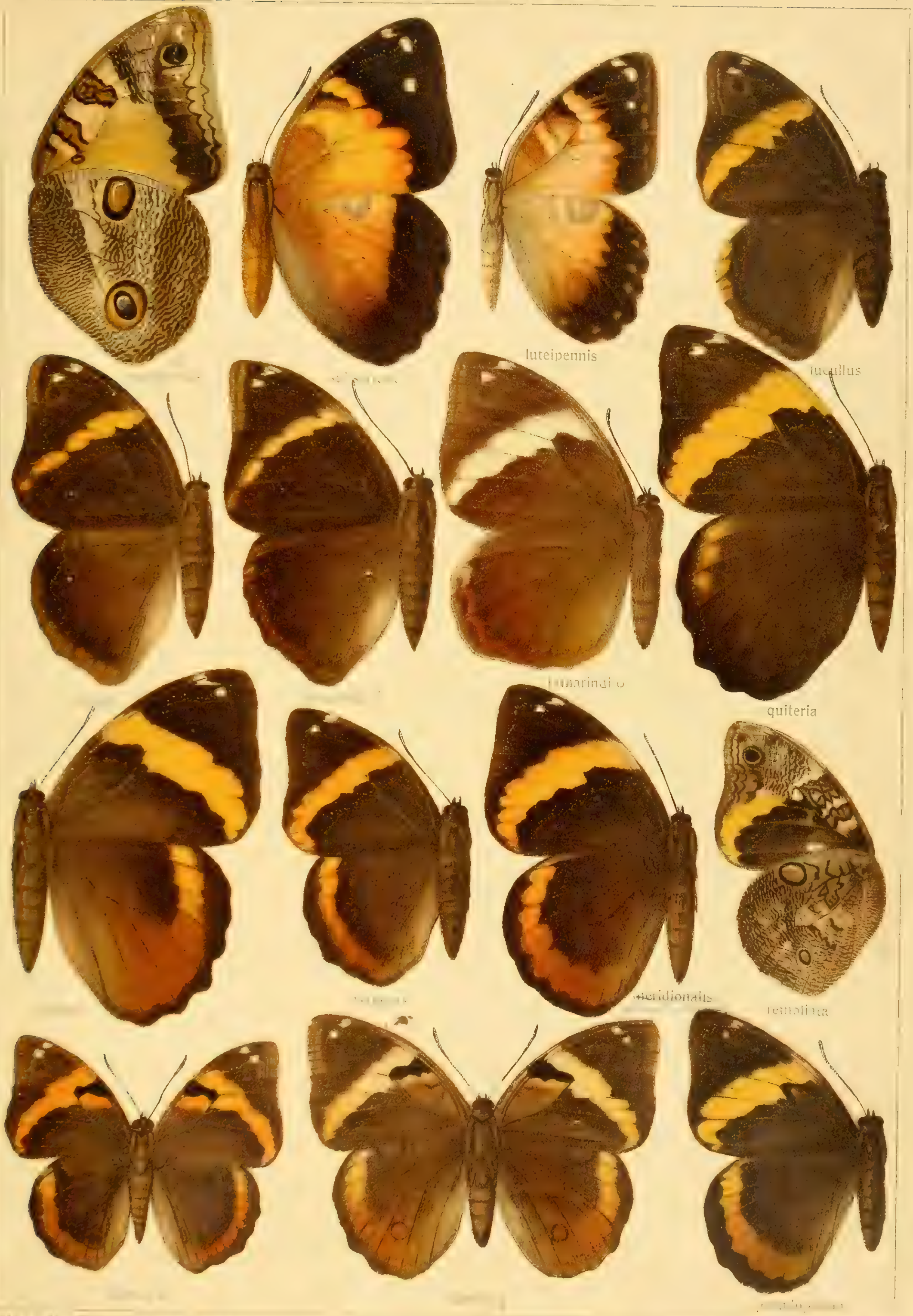
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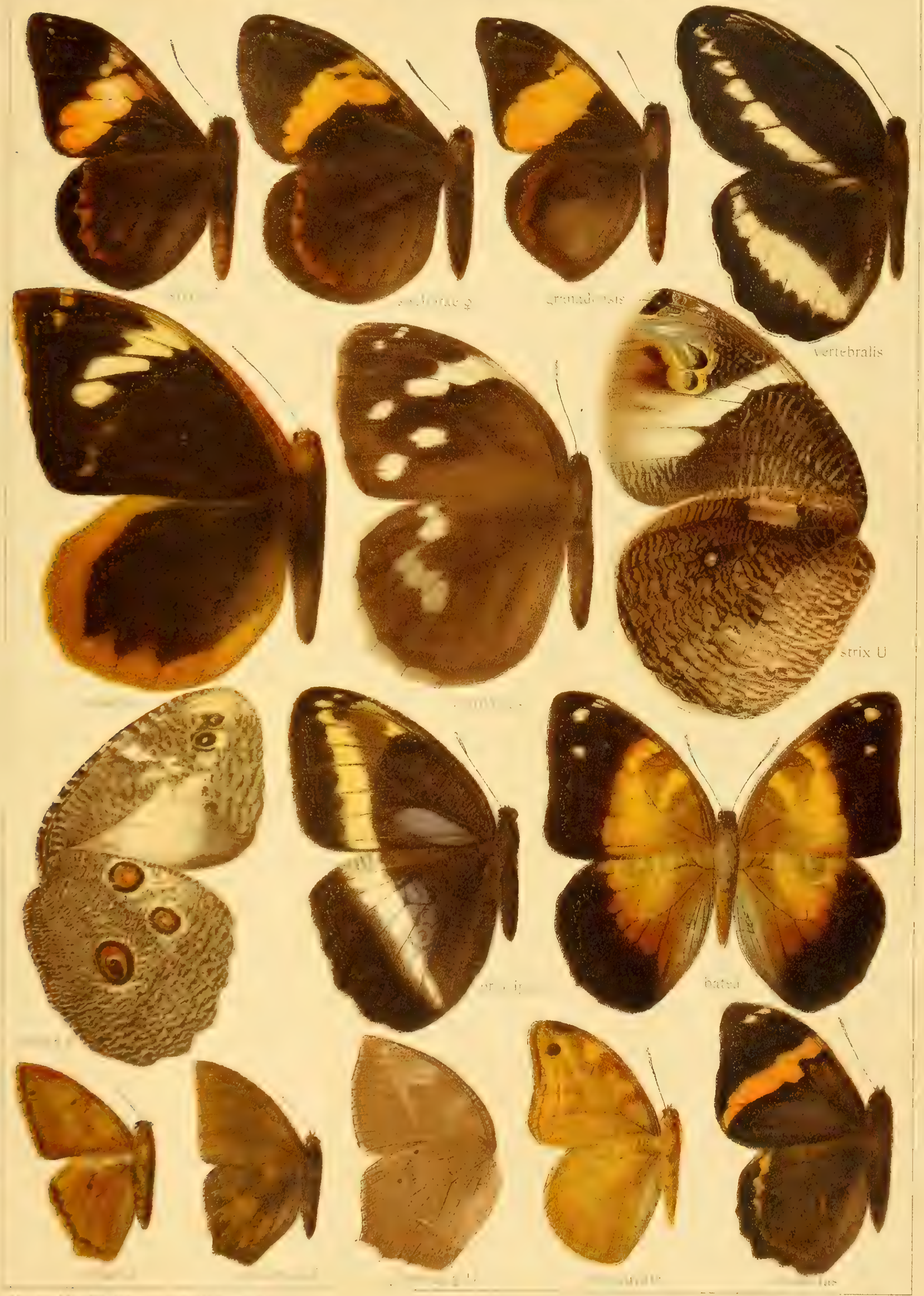
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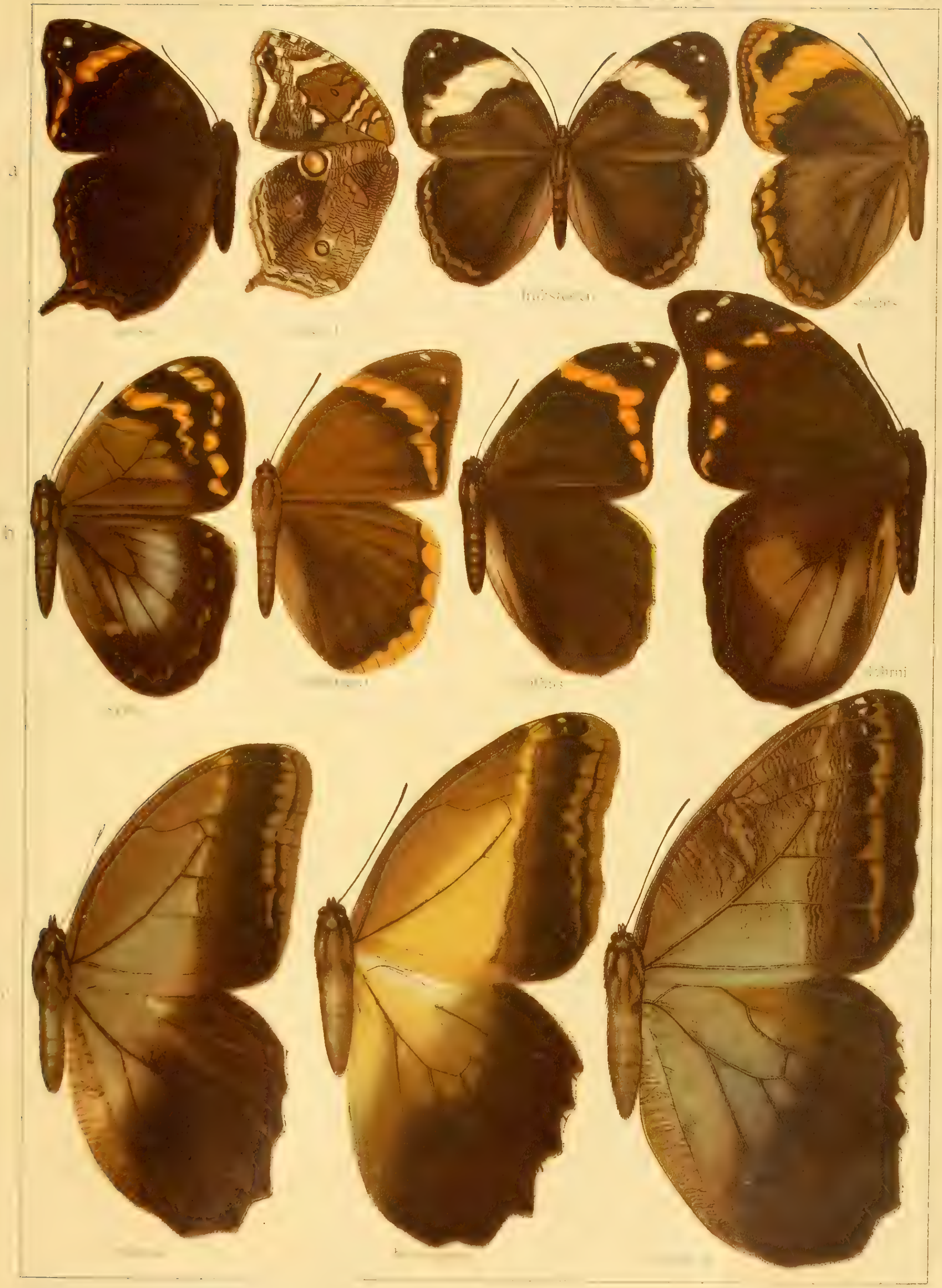
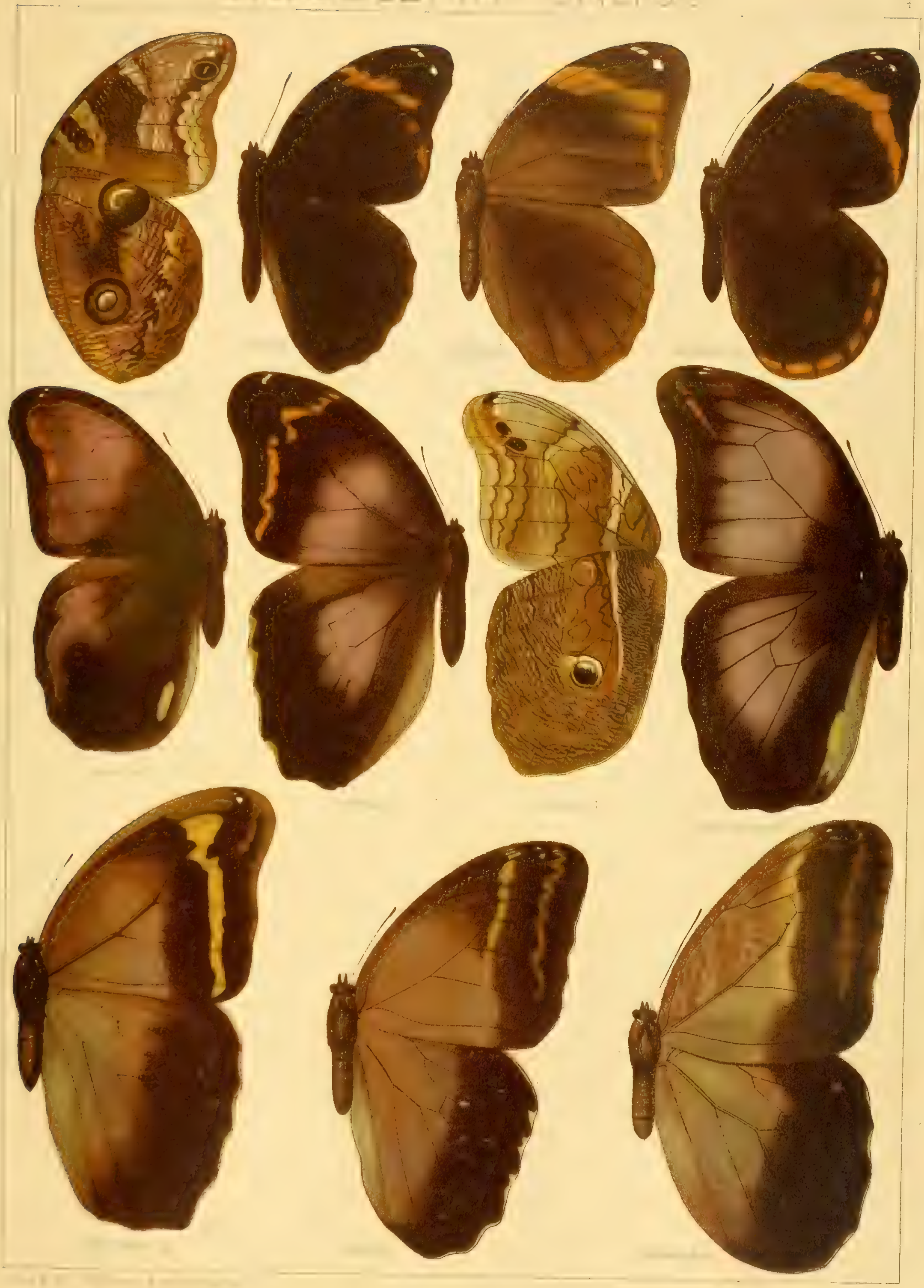


CATOBLEPIA - CALIGO



CALIGO

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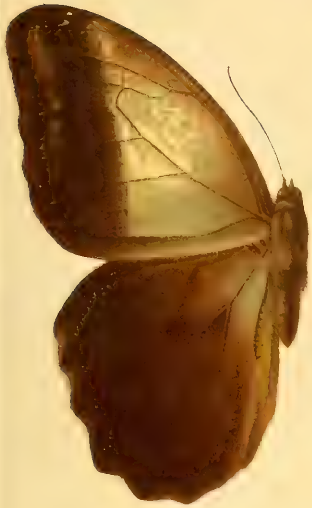
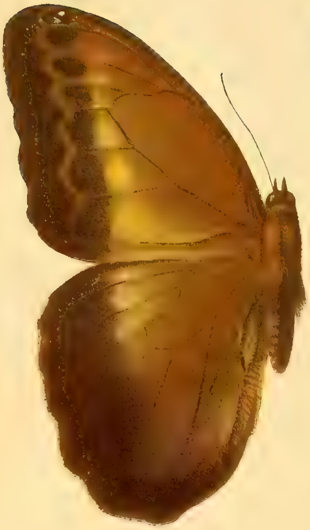
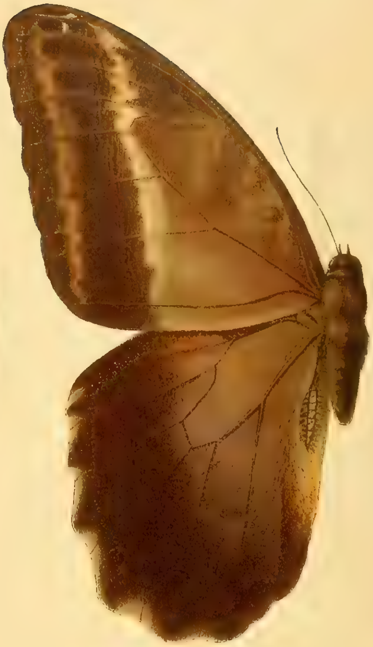
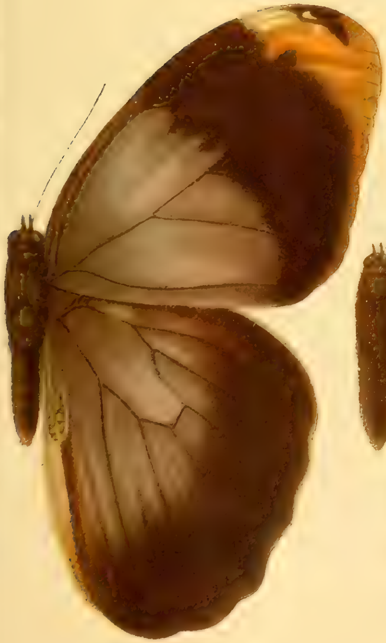
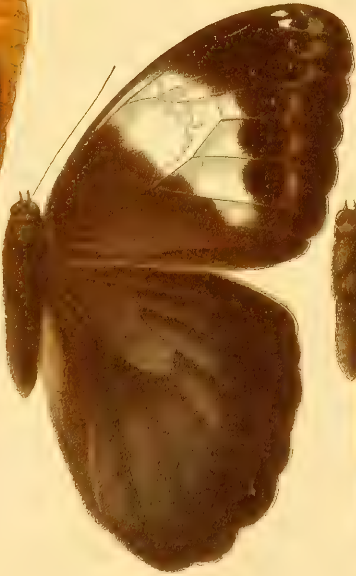
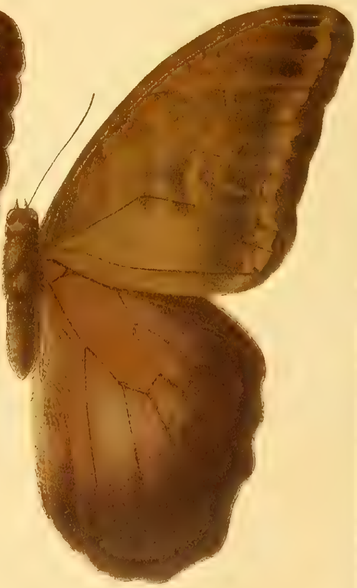

6. Family: **Morphidae** *Westw.*

This small family embraces the most strikingly characteristic butterflies of South America and the most magnificent of the Lepidoptera, which show the butterfly type in a perfection that is only surpassed by the Indo-Malayan *Ornithoptera*. The brilliant colouring of the upper surface and the elegant ocelli which nearly always adorn the under make the *Morphidae* superficially a very distinct, easily recognized group. It is not very easy, however, to separate them morphologically, for in spite of the external differences there are only indefinite structural distinctions from the Brassolids, Satyrids and Nymphalids and they form rather a transition from the Satyrids to the Nymphalids, so that they can only with difficulty be maintained as a separate family. Also from the Indian Amathusiids, which were formerly united with them, they only differ essentially in their habits and the food-plants of the larvae. All the Morphids agree in the weakly developed thorax, short abdomen, and in an extraordinarily powerful flight, which latter at once separates them from the sluggish Satyrids, Amathusiids and Brassolids. They share with the Nymphalids the habit of flying in the brightest sunshine, and structurally the open cell of the hindwing. With the Indian Amathusiids the Morphids are indeed somewhat allied in having larvae of the same shape, but differ again in the food, as the larva of the Amathusiids feeds on Monocotyledons, that of the Morphids, as far as is known, exclusively on Dicotyledons. From the bulk of the Amathusiids their Neotropical relatives differ in having two subcostal veins arising before the end of the cell on the forewing, a form of neuration which is only found again quite exceptionally in the Taenarid genus *Hyantis*. In the clasping-organs, however, the Morphids are highly specialized, and although the general arrangement of the tegumen suggests the Satyrids and Brassolids, those of *Morpho* differ in the extremely massive, unshapely uncus and valve. In some species (*Morpho hercules*) the breadth of the uncus actually exceeds that of the valve in the other families and is not equalled even in the Nymphalids. The robust uncus only recurs in the Brassolids (*Dynastor darius*) and even here considerably less extreme; the valve finds an analogy in the Papilionids (*Ornithoptera*) and in *Hestia*. The amorphous lateral clasps of the uncus, however, are entirely without a parallel. In the neuration may further be mentioned the fairly similar course of the discocellulars and their nearly uniform length. In the nearly straight middle and lower discocellulars the Morphids and Brassolids contrast with the Amathusiids, in which the lower discocellular is as a rule concave and deeply retracted proximally. The precostal cell of the hindwing may be distinctly developed (*Morpho menelaus*) or absent (*M. catenarius*), in the former case providing a further link with the Brassolids, in the latter with the Amathusiids. The median spur of the forewing also, on which Dr. SCHATZ lays special stress, is variable: either robust, short and pointed or filiform and distally curved, as is found also in the Amathusiids. The size of the cell of the forewing varies in the different groups of species; it is large in the *menelaus*, smaller in the *hecuba-hercules* group. GODMAN and SALVIN in 1881 recognized two subdivisions according to the shape of the hindwing: a) with tailed (*hecuba* group) and b) with rounded hindwing (*cypris* group). Between the two stand the members of the *aega* group with elongate, narrow hindwing. Dr. SCHATZ divided the species into six subdivisions, according to the scheme of colouring. The coloration of the 40 or so known species is indeed unusually variable and may be pure white or brilliant blue; between these come the members of the *hercules-hecuba* group with all gradations from light yellow to dark green and a dull chalky blue. The degree of sexual dimorphism is quite as variable as the colouring; species occur with the sexes almost alike (*laertes, hecuba, hercules*), whilst the *rhetenor-cypris* group shows astonishing contrasts in colour. It is worthy of note that just those ♂♂ which have the brilliant *Morpho* colouring (*cypris, rhetenor*) consort with almost ugly clay-yellow or dull ochreous ♀♀, which still tend to retain the colour of the Brassolids, from which the Morphids have probably developed. In a few species, however, transitions also occur.

The brilliant gloss of the ♂♂ is solely a physical phenomenon and is not due to any blue pigmentation in the scales, but to interference of the rays of light which pass through the infinitely thin layers of the scales. The scales themselves are simple yellowish to brownish, or opaque milk-white, extremely resistant in the chloride bath. The eyes of all the Morphids are naked, the antennae delicate, gradually terminating in a weak club. Apart from a friction-area at the basal part of the inner margin of the forewing no secondary sexual characters are present. One species is said to smell strongly of sulphur.

The egg of the Morphids is very large, in some species (*menelaus*) up to 2 mm. in diameter, hemispherical, not shiny, grey-white and but little transparent. In the species of the *achilles* group it has a narrow red-brown horizontal ring, in one species (*peleides*) the surface is rough (FASSL).

The larvae live in nests on different forest-trees and especially on the climbing plants, but attack one another. There are about five moults. Larva cylindrical, rather slender, somewhat thickened in the middle, tapering posteriorly. The last segment terminates in an indistinct tail-fork. The head is comparatively large and bears a pair of horizontal, conical processes, directed anteriorly, which are sometimes only rudimentary. Colour always bright, sometimes variegated, yellowish with red-brown dorsal stripes or cross-shaped figures, back with long subdorsal tufts of bristles, of which the middle and posterior are in some cases gaily coloured. Pupa similar to that of the genus *Amathusia* but more oval. Head with two tubercles, wing-cases distinctly projecting, abdomen sometimes belted with yellow; colour green or yellowish. Pupa on twigs or leaves attached by the abdomen but hanging free. The pupal stage lasts 20—30 days.

The Morphids, especially the entirely blue species, form on account of their brilliance a characteristic of the South American landscapes. They strike every naturalist and mention of them recurs in works of travel with the same stereotyped regularity as the description of the parrot's flight or the abundance of the humming-birds.

The author of these lines had the pleasure of himself observing Morphids in the woods of Sta. Catharina, but especially in a lonely side valley of the Capivary River, which at that time was still little explored by white men. A crystal waterfall sprinkled the roots of the forest giants, providing a point of attraction for butterflies of all kinds. Just as wild animals tread down regular tracks in order to reach water, so the Morphids assembled here daily, following up any chance clearings to get to the cascade, as if they came to seek cooling refreshment among the softly rustling arches of the tall bamboos, which were shaken and bedewed by the foaming water. They did not come in crowds but singly, floating along quietly. And how patiently one waited, until after some minutes of silent expectation a second iridescent form appeared, to be captured with the almost unfailing certainty of long practice as soon as it ventured within reach of the net.

The magic impression which the Morphids make on the European traveller seems to be shared also by the natives. Dr. Koch tells us (Archiv für Anthropologie, Brunswick, 1906, V, part 4, p. 295) that *Morpho menelaus* is chosen as a favourite model for the dance-masks of the red-skins on the Upper Rio Negro and Yapura Uaupes.

The habits of the separate species differ very much. Some, such as *achilles* and *deidamia*, fly unsteadily at the edges of woods or along the forest-paths which intersect the tropical forests and commonly settle on leaves or damp places on the ground or on the river-banks, also on fallen fruit. One species (*catenarius*) prefers the underwood, is even found near human habitations and can be baited in rather large numbers with hung-up bananas. The species of the *hecuba*, *menelaus* and *rhetenor* groups, however, avoid the ground; they never leave the timber-forests and soar round the tops of the highest trees without appreciable movement of the wings. In Ecuador it has been observed that the species of the *M. menelaus* group, which were flying along a small wooded branch-valley, stopped short on the bank of a broad river and flew back into the shade, not venturing even to cross a short open space in order to reach the other wooded bank.

The range of the Morphids extends over the whole of tropical and a part of subtropical America, from Mexico as far as Southern Brazil and Northern Argentina. The Amazon is its headquarters, particularly the streams which run down the eastern Cordilleras of Ecuador and Peru and form the sources of that river. On the Antilles no *Morpho* has yet been found, except on Trinidad, which in other respects also can scarcely be separated zoogeographically from Venezuela. Concerning the vertical distribution reliable information is wanting, but it is certain that some species occur up to about 2000 m. The alpine regions are avoided by the Morphos as by the Hestias or Amathusiids, as the shape of their wings is adapted to the protection of the woods. The period of flight of the Morphids is in general a very short one and it may be assumed that, except in the pure tropics, they everywhere occur (as in southern Brazil, where the author has been able to observe them himself) only in the height of the tropical summer, thus in the most favourable time for the development of the butterfly life. In consequence of their not being on the wing all the year round, like many Nymphalids and Pierids, they are only in quite rare cases subject to the influence of climatic contrasts and seasonal variation is only known with certainty in two species (*perseus* and *portis Hbn.*). On the other hand almost all the species are subject to a high degree of geographical modification, forming separate races whose identity with the collective species must often remain doubtful, especially at the extreme limit of their range, and one may assume that in the Amazon region in particular a distinct local form is developed on every important tributary. This phenomenon recurs in the different Brazilian provinces and it is astonishing that it was left to me to notice and to establish this fact.

The examples figured are from the H. Fruhstorfer collection at Geneva, which also contains the types of the newly described forms, except where the collection in the Zoological Museum at Berlin is mentioned as the source. Dr. K. Jordan was kind enough to send some types from the Felder collection in the Tring Museum for comparison, with the help of which I have been able to correct some long-standing errors, especially some for which Dr. STAUDINGER was responsible. I have to thank Dr. JORDAN most sincerely for his valuable help.

Genus: **Morpho** *F.*

Two groups: a) Hindwing with projecting tail-like appendage or deeply sinuate. Upper surface without metallic sheen; tegumen with unusually broad lamellae. Iphimedeia *nom. nov.*

b) Hindwing as a rule rounded or only slightly waved, upper surface (only one exception) with brilliant reflection; tegumen with finger-shaped excrescences. Morpho.

Group **Iphimedeia** *Fruhst.*

Species without metallic gloss on the upper surface, which varies from greenish blue to whitish in all gradations. The colouring very inconstant, the extremes sometimes not even confined to any fixed locality. Upper discocellular long, middle only inappreciably concave (i. e. proximally curved), the lower straight and placed at right angles to the anterior median. Cell of the forewing very narrow at the apex. Uncus broad, lateral clasps strikingly flat, valve without distal points. Most species love the sunshine, ascend to a great height and fly exclusively round the tops of tall trees.

M. hercules is confined to central and southern Brazil, where it occurs from Espiritu Santo to Sta. Catharina and ascends from the lowlands to about 800—1000 m. Flies chiefly in March. Concerning the early stages I am indebted to the detailed account furnished by Herr ZIKAN, who has bred *M. hercules* from the larva in Minas Geraes and whose report of his breeding we here reprint:

"*M. hercules* has one generation and flies in February and March. The eggs are laid on the leaves of a climbing plant (Cipó) with thick hard leaves (somewhat resembling those of the coffee-tree) and yellow fruit. This Cipó becomes rather thick and grows even in the highest trees. It seems to me to prefer dry ground and the tops of mountains. When small the larvae rest closely pressed together on a leaf which they cover with web as they do also the twigs on which they crawl to their food. I found them in numbers varying from 17 to 150 specimens; once even about 300, but I suspect that the latter came from more than one batch of eggs. I noticed that the butterfly prefers to lay its eggs in the decumbent tips of the Cipô, sometimes even quite low, about the height of a man and even lower. Others again I found very high, so that it required some courage to fetch them down from the giddy height. The first larvae (150 specimens) were found on the 30th September 1907. Most of them were moulting. They were about 1½ cm. in length, apparently after the first moult, as they underwent four more moults in captivity (including pupation). On the 13 October the first two larvae performed the second moult in captivity. When collected the colour of the larvae was red, body hairy, dorsal line lighter, with hair-tufts on both sides, the longest hairs being white. Head large, dark red, nearly black. After this second moult the hairs became denser and longer, especially at the sides. By 30 October all but twelve had moulted; four specimens had died, being stung by dipterous parasites. On the 10 November I noticed the first larva had completed the third moult; by the end of November most of them had moulted. Before the fourth moult, that is before pupation, the larva changes to a dirty green colour. I found the first larva in this condition on the 17 December and the first pupa the 31 December; on the 27 January the last larva pupated. From about 1200 larvae I obtained 800 pupae. Very many of the former were stung, without exception by flies. Others again dried up and went mouldy. The pupa is green, ringed with white. The colour scarcely changes appreciably before the emergence of the butterflies. The pupal stage lasts in the ♂♂ 45—52 days, in the ♀♀ 57—60 days. The first butterfly emerged on the 4 February 1908, the last on the 21 March. In addition to the ♀♀ having a longer pupal period than the ♂♂, their larvae also appear to pupate later. For from the 19 to the 25 of February only 20 ♀♀ emerged; whilst from the 26 February to the 1 March only 9 ♂♂ emerged, against some 170 ♀♀. About 50% of the pupae died, mostly dried up. When one broke them open they were mouldy inside. I lost a large number of larvae through their being too crowded, other larvae disturbing and knocking them down when they were pupating. Although I found the larvae of this butterfly in such abundance I have only seen about a dozen butterflies in the open. They fly high like *Morpho nestira* and not like *M. achillaena*, which keeps about 1 m. above the ground.

With regard to the larvae I may add that it is best only to take them in the adult stage; when collected young they do not grow properly, as every time they are given fresh food they spin over it so as to get a foothold, and in this way much nourishment is wasted. From those larvae which I collected when small I obtained quite small butterflies, while those which were taken large yielded large and more brightly coloured specimens. The hairs of the larva easily become detached, penetrate into soft places in the skin (between the fingers, etc.) and cause irritation. The larvae live gregariously until pupation. They feed at night; in the adult stage they sit during the day underneath the Cipó or on the trunk of the tree round which is winds. When small they sit on the spun-up leaves".

The pupa differs from that of *M. anaxibia* in the longer, more robust form, the more developed horns on the head, the much darker green ground-colour, the absence of the white abdominal ring and the presence of whitish yellow lines before the margin of the wing-cases. The collective species splits up into two local races: *hercules.* **hercules** *Dalm.*, originally described from Rio de Janeiro, but also occurring in Minas Geraes and Espiritu Santo. Upper surface more grey-green than in examples from more southern localities. Upperside of the forewing with two rows of submarginal yellow dots, of which the proximal are considerably broader than the antemarginal. Patch before the apex of the cell narrow, dark green, subobsolete. Cell black-green. Discal area glossy dark green. Distal border broad, deep black. Base of the forewing dark, of the hindwing somewhat lighter sea-green. Under surface: forewing bearing two very large rounded ocelli between the medians and two much smaller ones between the upper radial and the upper median. The proximal median spots narrow, irregular. Discal spot black. Cell with two very broad white longitudinal bands, posteriorly confluent. Hindwing predominantly red-brown with silver-white median band about 3 mm. in breadth. 3 anal ocelli with black iris. Length of the forewing 90 mm. and upwards. Espiritu Santo to Rio de Janeiro. — *diadema.* **diadema** *Fruhst.* (69 a). Upperside of the forewing with two rows of submarginal yellow dots, the proximal row only in the ♀ essentially broader than the antemarginal. Patch before the apex of the cell very broad, sharply defined, yellow-green. Cell dark olive-green. Discal area dull olive-green. Distal border broadly brown-black. Under surface: forewing with only two, very large, circular ocelli between the medians, the upper sometimes wanting. A third, small diffuse ocellus between the radials is sometimes present. The proximal, triangular median spots somewhat smaller than in *M. richardus* (p. 337), larger than in *hercules*. Cell with 2 isolated white, posteriorly pointed spots. Hindwing in the ♂ predominantly whitish grey with the basal part light brown, in the ♀ grey-white, marbled with light brown. Median band 5—6 mm. in breadth. 3 anal ocelli, of which the distal, with light brown iris, is occasionally obliterated. Length of the forewing: 75 mm. or above. Larva according to Dr. Wilhelm Müller on a Menispermea, gregarious, in the last stadium occasionally resting in masses of over a hundred individuals, one beside another, on the trunk of the trees up which the food-plant climbs. They remain quiescent during the day, only feeding at night. Ground-colour somewhat brown-red with a lighter red-yellow dorsal stripe and numerous spots of the same colour, almost fused into a lateral stripe. Head yellowish, with long bristles. Pupa with weak edges to the wing-case, green, not transparent, partially marked with white and covered with a white mealy coating which can be rubbed off.

M. theseus apparently replaces *hercules* in Central America and the Andean region. It is less constant than *hercules*, inclining to geographical and probably also to climatic variation, has somewhat narrower wings than *hercules* and is distinguished from all other Morphids by the long, pointed teeth of the hindwing. — *aratos.* **aratos** *Fruhst.* (66 c), the most northerly subspecies, inhabits Honduras and like all its Central American allies is among the greatest rarities of the fauna of their region. I have only received one example, which Wittkugel found during about 10 years' collecting near San Pedro Sula in Honduras. Ground-colour of both wings above and beneath paler than in its nearest ally, *M. justitiae Godm. & Salv.* from Guatemala. On the upperside of the forewing the third inner (proximal) submarginal row of dots (which is especially strongly expressed in *justitiae*) is obsolete. — *justitiae.* **justitiae** *Godm. & Salv.* has the yellow transcellular spot on the forewing more than three times as broad. The submarginal crescents of the hindwing are more elongated; the black colouring of the distal part of the hindwing extends to beyond the middle of the wing. Under surface red-brown instead of grey-yellow as in *aratos*. Ocelli of the hindwing more filled in with black. The locality "Mexico", which Godman and Salvin recorded from an old example from coll. Druce, has not been confirmed recently. — *aquarius.* **aquarius** *Btlr.* designates a well differentiated form, which occurs from Costa Rica to Panama as a subspecies, but in Colombia is still found as an accidental or seasonal variety together with the name-type *theseus* at Muzo, 400—800 m. *aquarius* has the basal area on the upperside of both wings chalky or milk-white, the original brown ground-colour confined to the submarginal region. The third (proximal) row of spots on the forewing, which stands on a light brown ground, assumes a blue-grey colouring. On the hindwing the pronounced yellow patches of *aratos* and *justitiae* disappear almost completely. The under surface is distinguished by a whitish violet postmedian area proximally to the ocelli, which is absent in *theseus*. Transitions to *theseus* are not rare in Colombia. — *theseus.* **theseus** *Deyr.* is the Colombian typical form, found in Muzo and in so-called Bogotá consignments, which it is well-known really come from the low-lying country, just as the so-called Darjeeling collections were likewise not made at Darjeeling, but in the hot valleys of the Testa. Ground-colour brown inclining to olive-green, base only quite faintly suffused with whitish. Cell black-brown at the extremity and with an inconspicuous whitish spot before the apex. Forewing with only two distinct rows of yellowish patches. Under surface red-brown with purple gloss, in places reddish ochre-yellow. — *thiasus.* **thiasus** *subsp. nov.* is based on examples from coll. Staudinger with the upper surface darkened throughout, brown-black. Colombia, more exact locality not ascertainable. — *amphitrion.* **amphitrion** *Stgr.*, from Chanchamayo, South Peru, has the forewing much elongated, with the cell blue-grey. ♂♂ also occur with the upper surface suffused with blue-white throughout. — *susarion.* **susarion** *subsp. nov.* is the most southern Andean branch-race, with somewhat darkened upper surface and of smaller size than the Peru race. Bolivia, apparently not rare. — *yaritanus.* **yaritanus** *subsp. nov.* constitutes the transition from *theseus* to *aratos* and *aquarius*. It agrees with *aquarius* in the extended milky blue basal tinge on the upper surface and with *aratos* in the very large, rounded, light ochre-yellow submarginal spots of the hindwing, and the forewing is distinguished by a large blue-white transcellular spot and very large blue-grey proximal submarginal dots. The under surface closely approaches *theseus theseus Deyr.* from Colombia in the predominantly red-brown colouring and the extended ochre-yellow areas. Always rare and local. Venezuela. — A further, very rare local race of *theseus* (but smaller than all the others), hitherto treated as a species, is **juturna** *juturna.* *Btlr.*, recently captured by FASSL on the upper Rio Negro at about 800 m.; hindwing with long lobes and upper surface a peculiar blue-white, faintly opalescent; distal border rather broadly black-brown and bearing on both wings a row of blue-white submarginal patches and a subterminal double row of red-brown undulate lines. Cell of the forewing separated from the transcellular white area by a broad, black, nearly triangular spot. — **fruhstorferi** *Röb.* is the corresponding race from the Eastern Andes, of which only one ♂ is yet known, dis- *fruhstorferi.* covered by Herr RICHARD HAENSCH at Santa Inez, East Cordilleras of Ecuador. It differs from *juturna* in the chalk-white upper surface without blue or violet admixture and the more pronounced yellowish subapical patches of both wings. Found at an elevation of about 1000 m.

M. perseus is an extremely variable polychromatic species, resembling a *hecuba* in miniature and copying its scheme of coloration. *perseus* with its branches inhabits the whole of Guiana and the Amazon country as well as the Andean region from Colombia to Bolivia, and was recently discovered also in Central Brazil. According to MICHAEL *perseus* is never seen fluttering round flowers, nor do the butterflies seem to require food or drink. They prefer rather to soar through the spaces of the illimitable forests like *Morpho hecuba* or to float along in unrestricted flight over the tops of the trees in a deep valley. According to HAHNEL *perseus* is one of the highest-flying Morphids and on account of its brown under surface, which looks very dark against the light sky, it gives the impression, when flying at a height of 8—10 m., of a black-coloured species. HAHNEL says that the butterflies, which in spite of their lively, jerky movement through the air scarcely flap the wings appreciably, present a charming spectacle, particularly when half a dozen or more meet and engage in a sham fight. Almost the whole morning such scenes are repeated, for only towards midday, after they have been flying over their wide domain for 2 or 3 hours, do their pinions become weary and they settle again in the shade of the branches on some large leaf, the back turned towards the dark and the eyes towards the open. One rarely finds even a single insect flying in the afternoon and then probably only when unfavourable weather has hindered its doing so in the morning. The butterflies occasionally dart down on to yellow *Papilio* ♀♀ drinking on the ground, undoubtedly taking them for their own ♀♀, which are also frequently yellow, and Dr. HAHNEL took advantage of this by fastening pieces of yellow paper in his net, which actually deceived the *perseus* ♂♂. **perseus** *Cr.* describes a ♀ form with the basal part *perseus.* of both wings light blue. **crameri** *Kirby* is the ♂ belonging to it, with the blue ground-colour sometimes *crameri.* somewhat darkened. **metellus** *Cr.* on the other hand designates ♀♀ with an ochre-yellow median band, de- *metellus.* ceptively like the colouring of *M. hecuba L.*, which flies at the same place. All three forms were obtained by CRAMER from Surinam. The larva is gregarious, only feeds for a short time and remains quiescent for the rest of the day. At Villa Bella on the Lower Amazon HAHNEL took examplas with the upper surfae inclining to bluish or brown, and on the Upper Amazon, judging from the STAUDINGER collection, ♂♂ occucr most commonly with ochre-yellow bands tinged with green, at Iquitos ♂♂ with dark green, and ♀♀ with green-blue median area. There are also light blue ♀♀ (typical *perseus*) from Villa Bella in the Berlin Museum. The particular colour is, however, apparently nowhere restricted to particular localities, though MICHAEL once bred 12 specimens from the larva on the Rio Madeira, the whole of which were pale grey-green above. — **iphiclus** *Fldr.* is a local form from Colombia with three distinct rows of yellow submarginal patches, *iphiclus.* whilst in the Amazon specimens the proximal row of dots is only indicated by three or four small scattered spots reaching as far as the middle of the wing. One ♂ in my collection, from Surinam, shows indeed only a couple of indistinct patches on the forewing. A ♀ which FASSL took on the upper Rio Negro at about 800 m. is remarkable for an extended light clay-yellow circumcellular area on the forewing, which reaches to the middle of the wing and is there lost, giving place to the pale green basal colouring Hindwing as far as the cell light green, the discal area black-brown. Forewing with three rows of ochre-yellow patches, of which the proximal terminates near the posterior median, the middle is composed of large triangular spots, the rows, except the third (proximal), continued on the hindwing also. Cell of the forewing lightly dusted with greenish yellow along the posterior wall. Under surface a peculiar dull grey-yellow with yellowish median area, two large median ocelli on the forewing and somewhat ill-defined eye-spots on the hindwing. — **scipio** *Fldr.*, with *scipio.* the incorrect locality "Brasilia meridionalis", which should perhaps read "Brasilia septentrionalis", is near the form *metellus Cr.*, agreeing with it in the ochreous median area of the upper surface and the washed-out submarginal patches. Habitat without doubt Surinam. — **richardus** *Fruhst.* (69 a), from Minas Geraes, differs *richardus.* most considerably: ♂ of indefinite greenish, ♀ of yellowish bronze-green colour, both above and beneath deceptively like a small *M. hercules Dalm.* I have only three examples before me, which were bred from the larva and killed too soon. Forewing with 3 rows of submarginal yellow dots. The patch before the apex of the cell broadly dull gold-yellow, with scattered black scales. Discal area of the forewing yellowish. Distal margin rather narrow, brown-black, base of both wings light green. Under surface: forewing with four small, elongate ocelli of about uniform size, with narrow black irides. Proximally to the ocelli three very large, triangular grey-yellow median spots. Underside of the hindwing predominantly red-brown, with violet sheen. Median band grey-violet. Length of the forewing 58 mm.

M. hecuba is the largest known *Morpho* and one may also call it the most interesting, on account of its habits, its susceptibility to climatic influences and its tendency to develop polychromatic forms in both sexes. We are indebted to Dr. Hahnel for the most detailed information of its habits of flight. Hahnel calls it the king of the forest, and says that it traverses a wider area than any other butterfly, travelling perhaps 30 km. or more in two or three hours, continuous flight in quest of its mate, which it follows persistently for whole days, quite alone, over woods and water-courses. In the distance the flight of *Morpho hecuba* looks quiet and slow, but nevertheless it moves quickly enough to evade the collector and newly emerged insects in particular adopt an impetuous pace during their first hours of flight. Sometines it happens that one of these apparently quietly hovering forms suddenly darts head downwards, and in this event it seems only to rise again with difficulty. They are driven to these violent erratic movements by dragon-flies, which lie in wait for them especially in marshy places and molest them from the tips of dry twigs, apparently more *hecuba.* out of wantonness than from a desire to catch them. — **hecuba** *L.*, the name-type, is distinguished by the contrast between the reddish brown forewing and the nearly black hindwing, which is only basally relieved with yellowish white. Forewing with yellowish, hindwing with white cilia. The under surface is remarkable for the silvery bands, which in nature are even clearer and more brilliant than in our figure (67 c). *hecuba* is one of the rarest butterflies and exclusively inhabits Surinam. What is labelled as *hecuba* in collections and sold as such by English dealers is a very similar local form but differing considerably, especially beneath, *obidonus.* namely **obidonus** *Fruhst.*, which only occurs on the north bank of the Lower Amazon. Of the numerous differences from *hecuba hecuba L.* the following may be mentioned: The distal black border of the forewing is broader, the proximal (inner) submarginal row of yellow spots consists of rounded instead of elongate patches. The basal area of both forewing and hindwing is not yellowish but chalk-white. Abdomen conformably with the basal colour pure white, not yellowish as in *hecuba.* The reddish submarginal spots of the hindwing absent; all the cilia of the hindwing pure white, while the upper cilia of *hecuba* are yellowish. The coloration of *obidonus* beneath is still further removed from the type, the ground-colour of the former being predominantly black, that of *hecuba* red-brown. *obidonus* is further characterized beneath by the absence of the ultracellular red-brown triangles between the median veins of the forewing. The ocelli of the hindwing are smaller, with reduced black iris, but still as complete as those of *hecuba*, and not posteriorly open as on our *heracles.* figure; the latter belongs to a hitherto unnamed race from the Middle Amazon, **heracles** *subsp. nov.* (67 c), in which the bordering of the ocelli is not rounded but horseshoe-shaped. *heracles*, however, agrees with *hecuba* in the double row of reddish submarginal patches on the upperside of the hindwing. Dr. Hahnel only three or four times saw *obidonus* floating high up through the branches and over the tops of the trees, and did not catch any. Dr. Staudinger only received his first *hecuba* ♂, which probably belonged to the form *heracles*, through the artist Otto Michael from the Rio Negro and my experienced collector Julius Michaelis sent me about 30 or 40 examples, which he captured in July and August with the help of a stick 4 or 5 m. in length, on which an unusually large net was fastened. The ♀ of *hecuba* and *hecuba obidonus* is considerably larger and has somewhat rounder wings than the ♂, with more strongly marked yellow and reddish submarginal patches on both wings, somewhat paler black distal area on the upperside of both wings and lighter yellow-brown under surface. According to Michael (Iris 1894, p. 197) *obidonus* has a short season of flight (June and July, once observed also in December). Fresh examples appear after every thunder-shower, but they already become less numerous on the second and third day, and the fourth one only sees a specimen here and there, and afterwards only worn examples are seen; ♀♀ nearly always sit still where ♂♂ will be passing, *cisseis.* in any case they only occasionally fly a short distance in the morning. — **cisseis** *Fldr.* (= egyptus *Deyr.*), from the south side of the Lower Amazon, is distinguished in the ♂ by dark, in the ♀ by lighter blue and rather narrow bands on the forewing. On the hindwing the basal area is somewhat more extended than in *hecuba* and *obidonus heracles*, according to the sex lighter or darker blue, the blue with slight mother-of-pearl gloss and the submarginal area adorned with blue-white lunulate spots. At Itaituba on the Tapajos occur more commonly light blue, more rarely dark blue, or even dark violet ♀♀. In Ecuador and even in Bolivia the colour-scheme of *cisseis* is retained, yet in these countries the ♂♂, and occasionally also the ♀♀, sometimes *cisseides.* assume a brownish colour. — **cisseides** *Fruhst.* The black which occupies the cell of the forewing extends somewhat beyond its apex, and in addition the blue spot before the apex of the cell is obsolescent, being only indicated by a little dusting. Of *cisseis* Bates writes that the butterflies present a magnificent spectacle as they sail along by twos or threes at a great height in the still air of a tropical morning. But according to Dr. Hahnel *cisseis* only awakes when the high-flying *perseus* have already long been floating over the clearings, in the distance looking like black spots, when the sun has begun to beat down with full power on the leafy dome of the forest and *M. menelaus* has finished its flight. *cisseis* then moves slightly forward on the leaf on which it passed the night, and opening the wings it slips with a bound into the air, rising lightly to the tops of the trees, among which it takes its flight until the clearing of the road appears, which it now follows, pursuing its way quietly and steadily, with the powerful wings scarcely quivering. It looks then like a narrow silver-blue stripe, in the vestal purity of its delicate white colour, which from the middle towards the costal margin changes into a light blue, posteriorly into black. The silver-white and brown of the under surface, however, present an excellent copy of large withered leaves covered with mildew at the veins, the similarity indeed being so great when it is resting in the shade of the branches that at Villa Bella Dr. Hahnel once took a newly emerged example hanging on the pupa for such a withered leaf, until to his amazement he proved it to be a living form. According to Michael (Iris 1894, p. 197) *cisseis* flies in every month, thus all the year round. — At Iquitos and Yurimaguas on the Upper Amazon *cisseis-obidonus* *phanodemus.* is replaced by **phanodemus** *Hew.*, the forewing of which in rare cases still bears traces of the *hecuba* colouring and is in part somewhat brown-yellow with the marginal area only slightly blue. But examples with green-blue median band seem to be the commonest, this colour sometimes distally changing to olive-green or greenish brown and towards the base to light blue and white. In the ♀ the shades of colour are less ill-defined and there occur pure and uniform light, dark, steel- and green-blue tinged specimens, to which it may be left to others to give special names. The under surface agrees completely with our figure 67 c, although it is only exceptionally that the apical ocelli of the hindwing are accompanied posteriorly by a small accessory eye-spot, as in the example from which the figure was drawn. Dr. Hahnel calls *phanodemus* a kingly form and compares it, in its quiet, peaceful and ghost-like flight, to the tutelary genius of the secret of the forest. Hahnel was only able to obtain *phanodemus* by erecting a sort of scaffolding of bamboos, which he set up to a height of about 5 m. in the line of flight of the Morphids. In order also to secure the *phanodemus* which came up from behind a mirror was fixed on the parapet of his tower, which indeed was not often successful, but when it was, gave all the greater satisfaction. — *polyidos.* **polyidos** *subsp. nov.* has a very broad black distal margin to the forewing, increasing in width from the costal margin to the anal angle, but the submarginal patches are only slightly indicated. The cell of the forewing contains only a few yellowish patches, the median band itself much narrowed. Hindwing basally pale yellow, distally lightly dusted with greenish. Under surface as in *hecuba obidonus*, except that the ocelli of the hindwing are somewhat smaller. From Itahapa Yarita in Venezuela, collected by Vraz. Type in coll. Staudinger in the Berlin Museum.

Group **Morpho** *F.* (= Leonte *Hbn.*).

Species with metallic gloss on the upper surface; upper discocellular short, middle strongly convex proximally, lower concave distally, in the obtuse angle directed towards the anterior median. Cell of the forewing considerably widened towards the apex. Uncus and its lateral clasps relatively slender, valve distally spined.

M. laertes is the best known of a small group of species which differ from all their allies in the chalky, milky or silvery white ground-colour. *laertes* may be easily known by the connected chain of narrow, oblong, ocellated median spots on the underside of the hindwing, which have mostly only indistinct white pupils and washed-out yellowish bordering. The bluish white colouring is brought out very well in the figure. The upper surface resembles the figured underside, except that the forewing continues narrowly margined with black to about the middle of the median area. Hindwing with some elongate black anteterminal and more distinct submarginal patches. *laertes* only inhabits the provinces of Rio de Janeiro and Espiritu Santo and is very common both at Rio and Petropolis from January to March. Larva in nests on various forest-trees. It was first figured by Burmeister. Arrangement of the bristles according to Dr. Wilhelm Müller as in *Morpho hercules.* Two sharply differentiated local races: *laertes.* **laertes** *Druce* (= epistrophis *Hbn.* [pro parte] ♀, iphitus *Fldr.* ♀) (68 c), ralatively small, apical patch on the forewing above narrow, as also the black curved spot at the apex of the cell; ♀ with sharply defined black-brown submarginal crescentic spots on the underside of the hindwing. All the markings yellow-brown, the intramedian ocelli of the forewing strongly marked, rounded, ♀ bright yellowish green, with mother-of-pearl gloss. — *eutropius.* **eutropius** *subsp. nov.* Larger than *laertes*, ground-colour both above and beneath more blue-green. Forewing with the apical patch more than twice as broad, the black hook at the discocellular more strongly marked. Hindwing in both sexes further with a subterminal series of intraneural striae, united into a median and an anal undulate band; under surface with the markings blackish instead of yellow-brown. The intramedian eye-spots of the forewing and the chain of ocelli on the hindwing more indistinct, narrower, their component parts more isolated. Espiritu Santo, rare.

catenarius. **M. catenarius** *Perry* is the oldest name for the species which is widely distributed in collections under the name of *epistrophis Hbn.*, and which differs from *laertes* in having the row of ocelli on the hindwing rounded instead of elongate, and also placed further apart. In addition most *catenarius* have the distal border of the forewing adorned with isolated black spots, not united into a band, and extending to the anal angle. The ♀♀ are not like the ♂♂, as in *laertes*, but decorated more plentifully with brown spots on the under surface and more distinct submarginal undulate bands on the upper surface. There are some ♀ examples, however, which in the markings approximate to those of the ♂. In Santa Catharina, particularly in the more elevated localities in the neighbourhood of Theresopolis and on the Alto-Uruguay, there occur commonly together with light ♀♀ also examples in which on the underside of the hindwing, especially about the cell and in the submarginal region, the ordinarily separated brown bands are broadly diffused, so as to form grotesque figures and extended undulate bands: = ♀-f. *marmorata.* **marmorata** *Fruhst.* In such examples the black distal bordering and submarginal spots on the upper surface are also considerably enlarged. Together with ♀♀ with the *nigrescens.* under surface marbled with brown occurs also, though extremely rarely, a black-spotted form (♀-f. **nigrescens** *form. nov.*), which is before me from the provinces of Paranà to Rio Grande do Sul. *catenarius* inhabits southern Brazil from São Paulo to Santa Catharina. Larva according to Dr. Wilhelm Müller on Inga semialata; head bright red with hairs of the same colour, body black, red and yellow, with a broad black lateral stripe and a yellow, black-edged mark in the median line. Larva in small companies (20—30). The caterpillars cover some leaves of the food-plant with webs, look like red lumps and are extremely conspicuous. The pupa on the whole resembles that of *Morpho achillides Fldr.* Like *Heliconius besckei catenarius* is one of the characteristic butterflies of Santa Catharina. In contrast to *Morpho anaxibia*, which only occurs in the timber-forests, it frequents rather the underwood, is fond of flying along broad bridle-paths, so far as they run near the rivers, and does not even avoid the neighbourhood of human habitations. Anyone who rides through the country in Santa Catharina from the middle of February to the beginning of April and travels any great distance, will probably observe on calm sunny days as many as 500—800 of these sluggish Morphids floating along as if lost in a dream. In the year 1889 I found it very easy to take 80—100 examples in one day near the orchards and among the tall bamboos on the banks of the Capivary River. Examples which have been on the wing longer also come to spread-out fruit-bait and it is only these which are occasionally observed settled on wet places in the primeval forests on the Alto Uruguay. — In northern Argentina and some districts of Rio *argentinus.* Grande do Sul we meet with a smaller geographical variety: **argentinus** *Fruhst.* (68 c). On the upper surface of the forewing the distal patches are no longer confluent with the submarginal band, but separate; the black spotting is also appreciably reduced on the upperside of the hindwing and the marbling of the under surface is likewise more delicate. The extreme of the reduction in the markings is found in ♂♂ from Rio Grande *efigurata.* de Sul, which have no black or brown spots at all on the under surface except the median ocelli (= **efigurata** *form. nov.*) According to Mabilde the larva is extremely gay in colouring and occurs from March to November on various forest trees. 20—30 always inhabit a nest of leaves and fine twigs, which one might take for a wonderful flower, or they sit in a lightly spun web. In November and December they change to the pupae, from which the imagines appear in 20—30 days. The butterflies are then very common from January to March, but become constantly more rare until April, which is already appreciably cool. According to Burmeister, who figured the larva of *M. catenarius* and *laertes* in 1878, *catenarius* (*argentinus*) is not rare in Uruguay, very common in the Argentine provinces of Corrientes and Entrerios, and was formerly observed also to the south of the Rio de la Plata and several times even taken at Buenos Ayres.

polyphemus. **M. polyphemus** *Dbl. & Hew.* (68 c) differs from its Brazilian relatives in the chalky white upper surface of both wings with delicate mother-of-pearl gloss, and also in the projecting apex of the forewing and the sharp teeth of the hindwing. On the upper surface the black distal bordering is absent and the discocellular shows only a quite narrow stripe. The ocelli of the forewing are larger than in *catenarius*, those of the hind- *luna.* wing more distinctly white-centred. As **luna** Butler has described an aberration from Mexico with the black spots on both wings unusually well developed. The flight of *polyphemus* is extremely rapid and irregular, and according to Godman and Salvin the species ascends in Guatemala to 4000 ft. and is often met with near the ground in villages or also high up round the tops of trees in the timber-forest. Distributed from Mexico to Guatemala and Nicaragua, occasionally also occurring in Panama.

M. achilles designates a collective species which shows representatives in the whole tropical region of South America. Almost every restricted locality has its own *achilles* form and the races inhabit both the tropical Atlantic and Pacific coasts of the faunistic region. It is very interesting to observe its gradations in colouring, which illustrate very beautifully how the blue colour changes step by step. All the branches are alike characterized by the rounded forewing and a black distal border (variable according to the locality), accompanied by a more or less distinct darkening of the basal half of the wings. The copulatory organs are of the simplest structure. Uncus short, slightly chitinized, point feebly curved, at the ventral side without the swellings so characteristic of *M. achillaena Hbn.* Valve broad, ventrally somewhat flattened, with the usual dorsal pad, near the dorsal end with two distinct teeth, distally with long bristles. Penis characterized by a distinct horn-like tooth, in this contrasting with the *menelaus* group and the species of the subgenus *Iphimedeia.* Larva rather large, cylindrical, of yellowish grey ground-colour, with two irregular brown dorsal stripes, at the sides with confused striation and spotting, on some segments two tufts of red-brown hairs, with shorter hair-pencils at the side and on the fourth and fifth segment. Head densely clothed with stiff hairs and with two short horns at its posterior end. Pupa elongate oval with two short conical horns on the head and of transparent green colour. Larva mostly singly on a Platymiscium (Schatz). The butterflies keep to damp places in the woods, rise but little above the ground and sometimes drink at wet spots. In Santa Catharina I did not succeed in baiting this species with fruit as can be done, for instance, with *M. catenarius.* The delimitation of the separate races is still quite uncertain; in the first place there is a lack of material with data and in addition anatomical investigations have yet to be made. The conditions are the most complicated in the Andean region and there seem to be two species there: *achilles L.*, which has probably originated from the Amazons, and *achillaena Hbn.*, apparently from Central Brazil. We begin here with the branch-races which have a strongly marked black basal area on the upperside of both wings, but indistinct reddish submarginal spots on the hindwing, in contradistinction to *achillaena Hbn.* and the subraces with the basal black indistinct or absent, but with distinct red submarginal spots on the upperside of the hindwing. — **achilles** *L.* (= helenor *Cr.* ♀), the name-type, came from Surinam and differs from *amazonicus*, *achilles.* which we figure (69 c), chiefly in the somewhat narrower blue median bands on both wings, which are still more reduced in the ♀, particularly on the hindwing. But the ♀ further bears on the forewing a median row of five white dots, beginning at the costal margin and ending in the middle of the median area. Under surface in both sexes with a whitish grey or blue submarginal band, sometimes also dusted with yellowish, on the forewing divided by a black line. Forewing with three, hindwing with four ocelli, which are proximally bordered with grey or greenish white. The larva was figured by Madame Merian as long ago as 1705. Ground-colour yellow-grey with probably somewhat darker (red) bands. According to Dr. W. Müller, however, Merian's drawings are often fantastic and inaccurate, so that they can only in rare cases be taken seriously. Two well-marked aberrations have already been made known: **leonte** *Hew.*, with hook-shaped *leonte.* prolongation of the proximally bent median band of the hindwing, and **lacrimans** *Fruhst.*, named from Cra- *lacrimans.* mer's figure, with diffused ocelli on the underside of the hindwing, an analagous case to which is found in *Stichophthalma tonkiniana Fruhst.*, vol. IX, pl. 103 a. In the Amazon region we meet with *achilles* in different gradations, the blue median bands being still relatively narrow in examples from the lower course, but considerably widened in those from the upper river. — **amazonicus** *Fruhst.* (69 c). Larger, longitudinal bands *amazonicus.* more brilliant blue, somewhat broader than in *achilles.* White submarginal patches of the forewing more prominent, but the postdiscal white dots either entirely absent or obsolescent. Obidos, flies August to September. **thetis** *Btlr.* is an aberration from Pará which lacks the ocelli on the under surface of the forewing; *thetis.* **micans** *Fruhst.* one which is characterized by a bright bronze gloss on the ocelli. — **hector** *Röb.* is a further *micans.* local form of *achilles*, and according to the example determined for me by Herr Röber differs from the type- *hector.* form in the larger white submarginal punctiform spots of the forewing. The blue median band is somewhat broader, more brilliantly glossy and with green reflection. The black basal area likewise with more intensive blue gloss. The white median bands on the under surface somewhat more prominent, but yet not so well developed as in *pindarus Fruhst.* from Matto Grosso. One ♀ from the upper Rio Negro, East Colombia, taken by Fassl, closely approaches *pindarus* ♀, only differing in the more sharply defined basal area of both wings, with less of the blue reflection, and in the shorter white transcellular band of the forewing, in which it also differs widely from *amazonicus Fruhst.* Of the local form of this species which flies on the upper Rio Negro at 1200 m. Fassl observed 2 ♀♀ ovipositing. The egg is hemispherical, at the base about 1½ mm. in diameter, greenish grey and dully transparent. It has a narrow, red-brown, horizontal ridge about the middle, but is otherwise unmarked and not glossy. — **pindarus** *Fruhst.* forms the long missing link which connects the Amazon races *pindarus.* with *trojana Röb.* from Paraguay and *coelestis Btlr.* from Rio Grande do Sul. ♂ above nearest to *amazonicus*, but the black basal area of both wings is already less sharply defined and the ♀ in particular begins to show the dark steel-blue tinge which in *trojana* suffuses both sexes and is still further intensified in *coelestis*, whilst in all the branch-forms of *achilles* it only forms a narrow border to the light blue ornamental band. The costal transcellular white patches of the forewing, as in *amazonicus*, cover two intraneural areas, so that *pindarus* ♂ inclines towards *leontius Fldr.* from Colombia in markings as well as in size. ♀ with distinct red-brown submarginal stripes on the upperside of the hindwing. The under surface tends in the direction of the southern *achilles* races in having the submarginal and median bands almost pure white, only slightly tinged with yellowish. Matto Grosso. — **trojana** *Röb.* (71 a) is considered one of the commonest and most characteristic butter- *trojana.* flies of Paraguay, and was first sent to Europe in large numbers about 10 years ago. The ♀, however, seems to be very rare; it strikingly resembles the ♂ in colouring, differing chiefly in the presence of five pure white median punctiform spots on the forewing and in the more intensive violet-blue tinge in the basal area of both wings. Beneath the ♀♀ agree with the ♂♂ in the extended grey-green intraneural areas, which are wanting in the other known *achilles* subspecies. In general *trojana* is more inclined to individual variation than its sister-races; but the maximum of the above-mentioned extension of the foreground of the ocelli on the under surface is reached in **mystica** *Fruhst.*, a form in which on the under surface the whole of the forewing from *mystica.* the white proximal bordering of the ocelli, which is already somewhat tinged with grey-green, to the black-brown admarginal band is powdered with light grey-green. Hindwing: black-brown submarginal band twice as broad as in normal *trojana.* All the rest of the distal area to beyond the ocelli covered with dark moss-green scales. The scales are very dense and form a compact area, which is bent round the ocelli in a sack-shape, completely surrounding the ocelli themselves. — **mullea** *Fruhst.*, on the contrary, designates a mela- *mullea.* notic extreme; ground-colour dark red-brown, above shot with dusky violet. Median band dark blue, very narrowly bordered with blue-violet. Submarginal dots dull rose-coloured, with grey-violet gloss (instead of white). Under surface: all the usually white markings dark grey-green, ocelli ringed with dark ochre-yellow, very small, on the forewing only one instead of the usual three. According to Burmeister *trojana* occurs also in the province of Misiones in Argentina. — *coelestis.* **coelestis** *Btlr.* (= achillides *Fldr.*), a well specialized branch-race of southern Brazil, approximates closely to *trojana Röb.*, from which it differs in its smaller size and in having the white submarginal patches of the forewing almost twice as broad, and further in the narrower and lighter, but more glossy blue median band on the upper surface. The red submarginal spots of the hindwing are also more strongly marked and the basal tinge on the upperside of both wings is predominantly steel-blue, with decidedly brighter reflection than in *trojana.* The under surface approaches that of *achillaena Hbn.* in the prominent, very broad white submarginal and median bands. The bronze-green bordering of the ocelli, however, again as in *trojana.* Very local and at the same time rare, not enumerated in any of the local lists of the fauna of Rio Grande do Sul; two ♂♂ only in coll. Fruhstorfer.

M. achillaena inhabits a smaller area than *achilles*; the species is accordingly also less rich in forms, the local variations confined to narrower limits; the extent of the the colour and markings is shown in our figures pl. 70 a and b. The characters which distinguish it from *achilles* are the absence of a sharply defined black or otherwise considerably darkened basal region on both wings and the more extended transcellular area on the forewing. Structure of the valve analogous to *M. achilles L.* Penis likewise with horny process. Uncus-characterized by a very broad ventral swelling, which in *achilles* is absent or scarcely indicated, running out into two pointed processes which are also present in *achilles.* It is worthy of note that the ♀♀ of all the *achillaena* races are commoner that those of the *achilles* forms, with which they otherwise agree bionomically, both sexes remaining near the ground in the woods and never taking lofty, circling flights like the species of the *menelaus*, *cypris* and *rhetenor* groups, or traversing long distances like the members of the *catenarius* and *polyphemus* series. — *anakreon.* **anakreon** *Fruhst.* has the most northerly distribution of the known races of the west coast. Upper surface near that of *bahiana* (70 b), but the black distal border costally somewhat broader, anally narrower, the white costal spot of the forewing reduced, not encroaching into the transcellular area. Under surface very dark. The median band of the forewing relatively narrow, ocelli ringed with dark yellow like those of *trojana.* Pernambuco, type in coll. Staudinger in the Berlin Museum. — *bahiana.* **bahiana** *Fruhst.* (70 b) does not differ materially in the ♂ from the ♀, which we figure, even the white median spots are present, although much reduced. In the ♂♂ also the white spot of the forewing does not extend beyond the subcostal veins and the small size of this patch distinguishes *bahiana* from all the other subspecies of *achillaena. bahiana* is also paler beneath than *anakreon* and the more southerly representatives. The rows of ocelli proximally bounded by a nearly always continuous elbowed grey-white median band. Not rare in Bahia and found in company with *Agrias ferdinandi Fruhst.* in the dry, open forests of that province. — *achillaena.* **achillaena** *Hbn.* (= subfasciata *Röb.* ex Peru, loc. err.) as one of the most easily captured butterflies very commonly finds its way into European collections. *achillaena* flies at Rio de Janeiro and in Espiritu Santo all the year round and prefers shady lowlands. The species does not ascend into the Organ Mountains and is already absent at Petropolis. Larva accoring to von Bönninghausen on a prickly climbing-plant; according to Burmeister yellow-grey with somewhat darker lateral stripes. ♂ near the figured *achillides* (70 a), but with light blue basal area, the white costal spot of the forewing not materially broader in the ♀. ♀ as a rule much larger than the ♂, the reddish yellow submarginal lunules of the hindwing standing out more distinctly than in *bahiana.* The rows of eye-spots on the under surface surrounded by extended whitish bands. The red anteterminal spots essentially more prominent than in *bahiana.* In the province of Minas Geraes we meet with a transition from the Rio type to the northern race; this has been described as *pellana.* **pellana** *Fruhst.* ♂. The white costal spot of the forewing only extends to the subcostal and consists in the ♂ of only 2 parts, instead of 3 as in *achillaena.* Black distal border of the forewing narrower, more sharply defined. In the ♀ the white costal spot more extended than in *achillaena*, there are even traces of white patches between the medians. General colouring lighter blue. Under surface: ocelli smaller than in the other *achillaena*, submarginal and ultracellular transverse bands of both wings considerably broader. — *paulista.* **paulista** *Fruhst.* Distal border of both wings more deeply incised. The white costal spot consists of 4 narrow divisions. Basal area of both wings darker than in *achillaena*, the blue reflection deeper, but even more glossy, with the first traces of the violet tone of *achillides.* The white transverse band on the underside of the forewing strikingly pure white and very extended. Under surface very dark. São Paulo. Concerning the habits Dr. Seitz writes that the weakness of the body leads to a slow, measured flapping of the wings, producing a gentle, oscillating motion which shows the magnificent gloss of the azure-blue wings to great advantage. — *violaceus.* **violaceus** *subsp. nov.* (70 a) (as *achillides*). Both sexes brilliant dark blue-violet above. The costal white spot is continued in the ♀ between the median veins. Submarginal patches of the forewing much enlarged. Under surface considerably darker than in *achillaena* and as in *paulista* characterized by reddish white anteterminal bands on the hindwing. Bordering of the ocelli on the forewing a peculiar grey-lilac, that of the hindwing pale grey, very much narrower than in the more northerly forms of *achillaena. violaceus* scarcely ascends to the higher foothills of the mountains; it is a true lowland species, flies on shady forest-paths and does not come to banana-bait. In the neighbourhood of Blumenau *violaceus* does not seem to be rare; but it has never been recorded as occurring in such abundance as *achilles trojana.* According to Dr. W. Müller the eggs are hemispherical in shape and break open a round lid on the convex surface when the larvae hatch. This does not take place for several weeks; the larva lives either singly or in small companies of 3—5. Larva on Platymiscium, a leguminous plant. Head proportionately very large, high and broad, narrowed above, at the same time rather short with two strong conical processes, horizontally directed posteriorly, placed on a common base. The surface of the head is covered with small pitting, and bears long, black, finely feathered, branched bristles, which give it the appearance of a poodle's head, as with certain Brassolids. Larva when first hatched partially transparent, after two days a beautiful chrome-yellow, with broad yellow dorsal and some lateral spots. In the later stages the body becomes extremely variegated, brown, red-yellow, white and black with dark stripes parallel to the margins of the light parts. Pupa rounded, with two short, conical horns, elongate oval, transparent green. This beautiful form has since 1888 passed as *achillides Fldr.*, in consequence of Staudinger's statements in the „Exotischen Tagfalter". By comparison with the type, however, I have been able to prove that Felder's name *achillides* refers to the *M. achilles* race from Rio Grande do Sul, which Butler had named *M. coelestis* a year before. The *achillides* of our plate was consequently without a name, and I propose that of *violaceus*, as it is the only *Morpho* yet known with the upper surface blue-violet.

M. patroclus *Fldr.* is a handsome, interesting species of the *achilles* group from eastern Colombia, near to *papirius Hpffr.* from Peru, and apparently occurring only in the lowlands. It was met with by Fassl at Villavicencio at an elevation of 400 m., whilst on the upper Rio Negro at about 800 m. it is already replaced by the very different *M. achilles hector Röb.* In contrast to the round-winged *achilles* type *patroclus* has the wings elongated, the hindwing in particular posteriorly narrowed and long-produced. Base of the upper surface of both wings broadly deep black, with inappreciable dark violet-blue reflection. The ornamental band strikingly broad, but nevertheless leaving a more extended black apical patch than in *papirius*. Anal angle of the hindwing as in *agamedes* and *phokylides* with blue instead of red inner-marginal spot. Under surface differing from all the *achilles* races and also from *papirius* in the very beautiful ochre-yellow bordering of the ocelli, the very broad greenish white median macular band of the forewing and the extended light green foreground of the ocelli on the hindwing. Under surface of the wings in both sexes a peculiar rich brownish ochre or earth-colour with dull green gloss, distinctly perceptible even in Felder's type, which is over 50 years old and which I have before me through the kindness of the directors of the Tring Museum, and showing up so distinctly in Fassl's example that I doubted whether it was natural. — **theodorus** *Fruhst.*, from the upper Uaupes, on the other hand is again normally coloured with the band on the upper surface less brightly glossy. Both wings beneath without brownish green tinge, more approaching the *achilles* colouring with reduced greenish white proximal bordering to the chain of ocelli. — **papirius** *Hpffr.* designates a well differentiated local form, almost a species, from Chanchamayo in Peru, which even surpasses *theodorus* in the extent of the light blue ornamental band on the upper surface, so that the black distal border, particularly on the forewing, is reduced to a breadth of a few millimeters, but contains a row of strongly marked, pure white submarginal dots which shine out as if it were set with pearls. — The culmination in size and in brilliance of colour, however, is not found until we reach the sources of the Amazon in Peru. Here the geographical variety, **agamedes** *subsp. nov.*, attains in the forewing a length of 75 mm. against 55 mm. in *achilles achilles L.* from Surinam, and the light blue ornamental band on the upper surface is 30 mm. in breadth, whilst the corresponding band in *achilles* does not exceed 12—13 mm. Hence the distal black border of both wings is naturally much reduced, although the basal deep black area, distally bordered with steel-blue, which is so characteristic of *achilles*, undergoes no reduction. The brilliant median band is only somewhat widened in the cell of the forewing and encroaches even more than in *papirius Hpffr.* into the cell of the hindwing. Beneath also an approach to *M. papirius Hpffr.* results from the essentially larger ocelli, which have first a light ochre-yellow, then a bronzy light green bordering, which in beauty and extent is hardly excelled by that of *patroclus Fldr.* — **phokylides** *Fruhst.*, from Yungas in Bolivia, recently taken in large numbers, forms the natural continuation of *agamedes*, but shows a decrease in wing-expanse. The median band becomes darker and is narrowed both towards the costal margin of the forewing and the inner angle of the hindwing. The ocelli of the under surface are again dull yellow and washed-out whitish, margined with blue, so causing an approach to *theodorus*. Valve distally sharply dentate, uncus without the ventral lamellae which characterize *achillaena* and *achillaena subfasciata Röb.*

patroclus. *theodorus.* *papirius.* *agamedes.* *phokylides.*

M. peleides occurs from Mexico southwards to Ecuador and eastwards in Venezuela. Although it only inhabits a comparatively small area its local variability is unexampled among the Morphids, and no other species shows even approximately such sudden mutations within circumscribed localities (not even excepting island races). The races from Mexico, Honduras, Nicaragua and Colombia approximate pretty closely, but between them in Guatemala and Costa Rica we find subspecies in which the usual garb is completely changed (in Guatemala on the underside also) and whose identity is only proved by the wing-contour and the position of the ocelli. Of great interest also is the occurrence of two geographical races in Guatemala, of which one only inhabits the Atlantic slopes of the central volcanos, the other, which is considerably rarer, exclusively the Pacific coast, so that GODMAN and SALVIN in 1881 still treated them as separate species. In order to explain the present heterogeneous mixture of races these authors advanced the theory that the Isthmus of Panama was originally inhabited by two species of *Morpho*, of which certain forms of *hyacinthus Btlr.* inhabited the islands which occupied the position of the present Panama and Costa Rica, the older species, which they considered to be *peleides Koll.*, being only indigenous to Colombia, and further that no *Morpho* at that time occured in Guatemala and Mexico. But after geological revolutions had produced the present union of the land, *peleides* was enabled to push its way along the isthmus, passing *hyacinthus* in Costa Rica, and occupying the rest of Central America, Yucatan and Southern Mexico. Those forms which were developed on the Pacific coast of Guatemala were most modified and became *octavia*, while the rest only differed slightly from their Colombian ancestors. According to our present knowledge such a complicated explanation is no longer needed; the Morphids in question are simply local and individual variations, such as we meet with, but modified to an even greater degree, among the members of other families (Papilionids, Euthaliids), particularly in Asia. *peleides* is undoubtedly a near relation of *achilles* and probably its northern form, as GODMAN and SALVIN assumed, and in Colombia *peleides* starts where *achilles* disappears, as it only inhabits the western part of the country from Bogotá to the Pacific coast, whilst *achilles* stops before the East Cordilleras. *peleides* agrees with *achilles* in habits, as it also frequents the underwood, unlike its sun-loving congeners *M. cypris* and *theseus*. The individual forms approach *achilles* above in bearing a broad black-brown basal area (*limpida*, 67 a) or approximate more to *achillaena* in the absence of basal darkening (*octavia*, 69 a). Yet between the two main forms all imaginable transitions occur; thus the basal area may also have a light blue or a dark steel-blue reflection as in *peleus Röb.* Extremely variable also are the submarginal white spots and costal patches of the forewing, of which two or three more or less prominent rows may be present, accompanied by transcellular median white dots, but likewise quite irregular. Only in the ♀♀ is this median ornamentation always present and in them the brown distal border on the forewing is sometimes widened nearly to the cell. The ♀♀ as a rule have the upper surface of the hindwing light glossy blue throughout, but there occur also ♀-forms with almost entirely brown upper surface, on which only the rudiments of a median band, in this case dark blue, are present. The colouring of the under surface also varies, apparently quite without system, the races from Colombia and Mexico being the deepest black-brown beneath, while between them in Central America occur the examples which are strongly banded with whitish in the distal part, especially on the forewing. One character, however, remains constant through all the forms; this is the nose-shaped distal projection of the whitish grey median line on the underside of the hindwing, which forms an acute angle between the anterior and the three posterior ocelli and is never interrupted at this place, whereas in *achillaena* races the median band may be broken up or continuous within the limits of the same geographical race. Clasping organs very close to those of *M. achilles*; valve distally more distinctly dentate, but appreciably more narrowly, the dorsal pad, however, already reduced. Ventral process of the uncus as weak as in *achilles*. Penis

montezuma. armed with longer and more pointed teeth than in *achilles* and *achillaena*. — **montezuma** *Guén.* is the most northerly and the smallest race and at the same time the most easily distinguished on account of the rounded forewing, which is surrounded by a relatively broad deep black distal border containing only one row of pure white punctiform spots, of the size of a pin's head. The distal border sends out fine black points along the veins. Under surface predominantly red-brown with strikingly small ocelli and reddish yellow anteterminal bands on both wings and a reddish yellow shade beyond the cell on the forewing; ♀♀ are apparently rare; they are wanting in my collection. GODMAN and SALVIN give Yucatan as locality. — Through the firm of

zela. BANG-HAAS I recently received an interesting local or seasonal, perhaps mountain form, **zela** *subsp. nov.*, of distinct *montezuma* character in its rounded forewing and with still more pronounced, dull vinous bands on the under surface, and noteworthy above for having the black distal border of the forewing only a few mm. in breadth, very little ornamented with white, and proximally sending out no black teeth along the veins.

octavia. A more exact locality than Mexico could not be ascertained. — **octavia** *Bates* (69 a) must be considered one of the most remarkable and most easily recognized Morphids on account of its delicate light blue but uncommonly glossy reflection and the extended whitish brown bordering of the wings. The ♀ is even paler than the ♂ and in both sexes the eye-spots of the under surface show through distinctly. Under surface basally light cocoa-brown, the distal area light havanna-brown with slight violet sheen, whitish bands and flesh-coloured anteterminal spots. Ocelli, particularly those of the hindwing, with very broad light ochre-yellow bordering. Habitat exclusively the forests of the Pacific coast of Guatemala.

zonaras. — As **zonaras** *subsp. nov.* we here introduce a further local form allied to the *octavia* type, the type of which is in the British Museum, with the very doubtful locality "Colombia". The ♂ differs from *octavia* in the still purer white anteterminal shade and the lighter blue basal part of both wings. Beneath the brown marginal area extends further proximad to the wall of the cell and the submarginal bracket-shaped markings are not only considerably enlarged but also proximally bordered by a conspicuous brown band. — **hyacinthus** *Btlr.* (67 a) inhabits Honduras, where, however, it is by no means common. Easy *hyacinthus.* to separate from *montezuma* by its larger size and more pointed forewing, *hyacinthus* is further noteworthy for the lighter and more glossy blue on both wings. The black distal border as a rule smooth at its proximal edge; yet examples also occur with the distal border even more strongly dentate proximally than in *montezuma.* Clasping-organs descriped in the diagnosis of the species. **crispitaenia** *Fruhst.* is a ♀-form of *hyacinthus* *crispitaenia.* margined with brown-black almost to the middle of the wings, with large white median patches, running out into a fine point distally. — **pudicis** *Fruhst.* is the local race from Nicaragua; much smaller than examples *pudicis.* from Mexico and Honduras, the distal border of the forewing very narrow. The under surface of the wings lighter, as in *limpida Btlr.*; but the markings are somewhat more shadowy, ocelli larger than in *crispitaenia,* transverse bands in the cell of the hindwing somewhat narrower than in *limpida.* — Under **limpida** *Btlr.*, as the *limpida.* oldest name, we include here the polymorphic series of individuals which inhabit Costa Rica, the Volcan de Chiriqui and the state of Panama. We figure at 67 a the prevailing form from Costa Rica, which is labelled **hydorina** *Btlr.* in the British Museum and is characterized by having the basal half of both wings mostly dark *hydorina.* brown. **marinita** *Btlr.* designates examples with the blue median band of the hindwing reduced, or occasionally *marinita.* quite obsolete: the name **narcissus** *Stgr.* describes ♂♂ from Chiriqui with brilliant metallic blue gloss on the *narcissus.* proximal half of both wings, and *limpida* itself is based on an aberrant intermediate form. According to Godman and Salvin, however, one might similarly erect a further series of names, as no two specimens are alike. At any rate, *narcissus* with its predominantly dark or violet-blue base leads over to **peleides** *Koll.*, the commonest *peleides.* *Morpho* of Colombia, which is wanting in no consignment from there. The white dotting of the submarginal area of *peleides* is simpler than in the northern races, the distal border always narrow, deep black, rarely dentate proximally and even then only indistinctly. The light blue of the upper surface uniform, only with inappreciably darker, slightly violet reflections over the basal part. ♀ with two rows of white submarginal dots on the forewing, of which the proximal also are rounded, not elongate as in *limpida.* Under surface of the ♂♂, as already mentioned above, deepest in colour, almost black-brown with grey-white anteterminal lines. According to Fassl *peleides* only occurs in Western Colombia, from Bogotá to the Pacific coast, whilst *achilles* is only found to the east, and the two species seem to be separated from one another. — Egg of the size of that of *achilles*, hemispherical, with a slight basal depression, greenish yellow, dully transparent, surface rough, not glossy. — **cortone** *subsp. nov.* *cortone.* differs from normal *peleides* in its smaller size and in having the blue gloss much lighter, particularly distally, and the black distal border of both wings more extended. The under surface is characterized by its almost entirely white subterminal lines, the light bronze-green gloss of the proximal bordering of the ocelli and the light yellow rings which surround them. Moreover the vermilion lunulate spots of the hindwing stand out more distinctly and might even be described as being as broad again as in *peleides.* Colombia. — **maculata** *Rcb.* *maculata.* seems to be the most southern local form yet discovered. It may be easily known by the whitish blue upper surface, relatively narrow border and especially the lighter underside, with broader grey-white band bordering the ocelli, the paler submarginal lunules and the widened anteterminal patches. Ecuador. — **corydon** *Guén.* is the *corydon.* most eastern offshoot of the collective species and was described from Venezuela as long ago as 1859, but is still always rare in collections. ♂ smaller, hindwing more broadly margined with black. Under surface with the bands even paler than in *maculata*, ocelli quite small, similar to those of *pudicis Fruhst.* Transverse bands in the cell of the forewing still broader than in *maculata.* The ♀ is not yet known. According to Dr. Hahnel *corydon* is fond of feeding on fallen fruit and in particular cannot resist sugar-cane which has been split open and spread out on forest-paths, though it is often only worn specimens that visit the bait. — **peleus** *Röb.* (69 b) *peleus.* is an interesting, well differentiated form either belonging to the rainy season or to the mountains; it somewhat corresponds to *narcissus Stgr.* from Panama (Chiriqui), with the basal part of both wings darker blue, shot with intensive, nearly violet reflections. The black marginal area of both wings narrower, not widened apically, thus running parallel on the forewing with the distal margin. Under surface about as in *insularis Fruhst.* from Trinidad, without the whitish shade proximally to the row of ocelli. The band accompanying the ocelli not white, but greenish as in *corydon*, not interrupted in the median part, but joined to a projecting nose-shaped mark. Venezuela, co-type in coll. Fruhstorfer. — **insularis** *subsp. nov.* A well defined island *insularis.* race; ♂ above showing more resemblance to *peleides cortone Fruhst.* than to the neighbouring Venezuelan race, the black distal border of the wings, particularly of the hindwing, considerably narrower, without submarginal bordering of small red spots. ♀ above very similar to the ♂ of *corydon*, but with broader black border to both wings. The transcellular region about as in *peleides* ♀, but deeper violet-blue. Between the costal and the lower median are placed five white interneural dots, which are larger than in *peleides* ♀ and more suggest those of *hyacinthus Btlr.* The distinct proximal (second) submarginal row of dots of *peleides* is wanting. Hindwing with quite small reddish patches. The blue area deeper blue than in *peleides*, with brilliant violet reflection; under surface considerably darker than in *corydon*, resembling that of *cortone.* The foreground of the ocelli densely dusted with greenish, the whitish and light brown parts of the median area of both wings, which characterize *corydon*, are absent. According to Kaye common on Trinidad; both sexes collected by A. H. Fassl at the Maracas Fall. From the Sierra Nevada Godman and Salvin record a *peleides* form, which perhaps connects *corydon Guén.* with *peleides Koll.*

M. leontius differs from *peleides* in the broader black distal border, which, particularly on the forewing, is widened towards the cell and even exceeds in breadth that of *peleides cortone Fruhst.* Basal part of both wings with some amount of blue-violet gloss, but not so much darkened as in *peleus*. Under surface as in *peleus*, but *leontius.* with open band in the median part of the hindwing. Two local forms: **leontius** *Fldr.*, with the black distal border of the forewing deeply incised proximally. The distal area of the hindwing more extended than in *popilius*. Under surface somewhat lighter than in the Bolivian branch-race; the longitudinal bands purer white. Felder's type is an aberrant example with five instead of three ocelli on the forewing beneath and bears the incorrect *popilius.* locality-label: "Bogotá"; *leontius* probably inhabits the Cauca Valley. — **popilius** *Hpffr.*, described by its author from Bolivia and Venezuela, is likewise still very rare; my collection contains only one ♂, and the ♀ probably still awaits discovery. *popilius* is characterized by the extremely delicate light blue, but nevertheless brightly glossy upper surface of both wings, which somewhat recalls that of *peleides*, but shades proximally into a slightly steel-blue, distally into a nearly whitish area, while *peleides* has a deeper and more uniform blue gloss. A further characteristic is the costally widened, but posteriorly narrowed black distal border of the forewing, which is ornamented with five white dots, decreasing in size towards the anal angle. Distal bordering of the hindwing likewise with a slight tendency to become narrower posteriorly, with quite faint traces of reddish patches. Under surface similar to that of our figure, which, however, belongs to another species (*vitrea Btlr.*), which I at first took for *popilius*; ground-colour more red-brown; submarginal and median bands yellowish white, broader, ocelli smaller, ringed with lighter yellow. If *popilius* really occurs in Venezuela, as Hopffer assumed, the Venezuelan race must differ quite considerably from the name-type from Bolivia, for that a Morphid should not have been modified in a locality so remote is, judging from experience of all the allied species, quite out of the question.

telamon. **M. vitrea** splits up into two local races: **telamon** *Röb.* comes from the Cauca Valley in Colombia and approaches *peleides Koll.* According to its author *telamon* differs essentially from *peleides* in its shape: the forewing is broader (much the shape of the diagonal half of a square) and the hindwing is much rounder. The upper surface is not such a whitish blue as in *peleides* and in certain lights has a strongly violet tinge. The dark distal border is of quite uniform breadth on both wings and is not black, but only grey-black and very narrow (scarcely 4 mm. in breadth) with very indistinct small light submarginal spots; the basal part of the upperside is not darkened, the costal stripe of the forewing is likewise only grey-black and little conspicuous, and the white costal spot near the discocellular is very small and obsolescent. At the inner angle of the hindwing there is only a small, very obscure red-brown stripe. The under surface is much lighter than in *peleides* (reddish brown), the forewing has besides the usual three eye-spots also a fourth, small, imperfectly developed ocellus between the upper radial and the last subcostal vein, the light bordering of the eye-spots is much broader and dirty reddish white, the oblique whitish postmedian band is more extended and at the distal angle joins the light submarginal markings. The yellowish submarginal stripe of the forewing broader, the submarginal markings of the hindwing reduced and the small dirty reddish stripes in them very little developed. The subapical eye-spot of the *vitrea.* hindwing smaller than in *peleides*. Expanse: 118 mm. — **vitrea** *Btlr.* (69 b, as *popilius*) has, like *telamon*, a very narrow black distal border, deeply dentate proximally, a narrow white costal spot running out into a fine line towards the base, and three subapical dots on the forewing, the upper surface of both wings greenish blue with golden lateral reflections, such as are found in no other species of *Morpho*. Under surface brown with peculiar dull olive-green gloss. Median band greenish with bronzy gloss. Ocelli with greenish yellow bordering and the pupil slightly dotted with red and violet. Bolivia, Province of Yungas. 2 ♂♂ in coll. Fruhstorfer. Length of the forewing 60—63 mm. The ♀ has the black distal border of the forewing much widened and extending in the shape of long teeth along the veins. Somewhat beyond the cell are placed four indistinct white intraneural dots, which terminate before the posterior median. Hindwing about as in *peleides Koll.* The basal area of both wings moderately broadly blackish with intensive ultramarine reflection. Under surface: ocelli first broadly ringed with greenish yellow, then with blackish, finally with light green, the greenish bordering more extended than in the ♂, shading somewhat into white towards the costal. Submarginal band only slightly whitish, dusted with green. Hindwing with small, inconspicuous reddish terminal spots. Coroico, Bolivia, 1500 m. Butler's diagnosis is somewhat meagre and leaves it doubtful whether it refers to the species dealt with here. According to this description the ♂ has the upper surface variable in colour, blue-green. Base, costal and inner margins of the hindwing brown. Distal margin broadly brown. Forewing with a white spot at the end of the cell, bounded by the first subcostal vein. A submarginal row of six white spots at the distal margin. Under surface as in *achilles*, except that the bands are more greenish and somewhat more interrupted. *vitrea* differs from *achillaena* in having the brown distal border of the upper surface only about half the usual breadth and the blue colouring more greenish, while the under surface more resembles *M. achilles* than *achillaena*.

M. granadensis, distributed from Central America to Ecuador, is a perfectly valid and well defined species, notwithstanding that Felder suspected he might be dealing with a local form of *deidamia* and that Staudinger also doubted its specific right. *granadensis* cannot be a local form of *deidamia Hbn.* (67 a) since the latter is represented in Colombia by the recently discovered *hermione Röb.* Moreover a glance at the huge ocelli of the under surface and the reduction of the white markings shows the fundamental difference. — **polybaptus** *Btlr.* (= candelarius *Stgr.*) differs only inconsiderably from the name-type, having the black *polybaptus.* distal area of the upper surface somewhat widened and the white subapical spot of the forewing more strongly expressed. On the under surface the whitish yellow anteterminal bands are more prominent and the bordering to the ocelli is of a finer bronzy greenish colour. Median band of the hindwing strongly elbowed, distally with a nose-shaped projection in the middle of the wing. Originally described from Costa Rica, *polybaptus* also occurs, according to GODMAN and SALVIN, in Nacaragua and the state of Panama. — **granadensis** *Fldr.* was first sent to *granadensis.* FELDER by the dealer DEYROLLE and pretty certainly came from the Cauca Valley, whence DEYROLLE had received a large consignment. Upper surface similar to *peleides*, but the black distal border considerably more extended, the wings more rounded, the *Morpho* reflection deeper blue, and especially characterized by its large, light cinnamon-brown ringed ocelli, those on the forewing of uniform size, whilst on the hindwing the apical eye-spots far surpass the three closely approximated anal ocelli. — **lycanor** *Fruhst.* (71 b) comes from Ecuador; the ♀ *lycanor.* larger, distal border broader, the blue reflection deeper than in *granadensis Fldr.* from Colombia. Basal part of both wings with dark violet reflection. Under surface: the peculiar pale ochre-yellow bands of the forewing more extended, all the ocelli larger. The whitish stripes and bands, which recall *deidamia*, darker.

M. rugitaeniatus *Fruhst.* (70 b) unites in itself the characteristics of the *peleides*, *achilles* and *granadensis* *rugitaeniatus.* groups. ♂: upper surface with the exception of the very deeply notched black distal border deep glossy blue. Upper part of the cell and the basal parts of both wings with dark violet reflection, likewise the broad blue rays which penetrate deeply into the deep black distal border. At the costal margin shortly beyond the cell a white spot, in addition a diffuse white subapical patch and 3—5 white submarginal dots on the forewing. Forewing yellowish, the small admarginal spots of the hindwing pure white and placed in pairs. Under surface: forewing of *peleides*-, hindwing of *achillaena*-character. Ocelli very large, with broad yellow irides and very large diffuse white pupils, bordering on the forewing blue-white, composed of delicate lines, on the hindwing greenish white, consisting of stronger lines. Forewing with an ochre-yellow, strongly marked admarginal band and two milk-white submarginal bands separated by a brown undulate line. Hindwing with an interrupted dark ochreous admarginal and a violet-white submarginal band, which are separated by dark brick-red, proximally pointed patches. Transverse bands in the cell of the forewing narrow, like the median stripes of the hindwing, greenish. The angled median band proximally to the ocelli continuous (as in *bahiana Fruhst.*), the 3 anal ocelli surrounded by a common greenish white area. Type from Paramba, Ecuador.

M. deidamia, the most copiously adorned with white of any of the *achilles* group, according to Dr. HAHNEL has a straight and rapid flight, not dipping up and down with such energy as the species of the *menelaus* group, but by preference keeping to open paths and clearings in the woods, and so obtaining free scope for its powerful flight, not flitting restlessly through the thickets of underwood and disappearing in gaps among the shrubs, as is said to be the habit of the species of the *achilles* group. With the exception of Bolivia *deidamia* only inhabits purely tropical regions and it splits up into a series of branch-races, some of which are sharply differentiated. The ♀♀ are not much rarer than the ♂♂, more resemble the ♀♀ of *achilles* than their own ♂♂ and are considerably larger. The ♂♂ show parallel variation to those of the *peleides* series, in the Amazon region they already range from specimens with little to those with strongly darkened basal part on the upper surface, which in the races of the southern Andes again disappears. In addition the extent of the black distal border, which is only dotted with white in its anterior part, varies geographically. — **deidamia** *Hbn.* (67 a), *deidamia.* the name-type, named by its author from CRAMER's figures, inhabits Surinam and will probably also be found in French and British Guiana. Basal part of the upper surface in the ♂♂ brilliant steel-blue, the distal area of both wings delicate light blue (as in *popilius Hpffr.*). But in the ♀ the proximal region is darkened, being broadly black, though with intensive metallic reflection. Forewing with three white median dots, the light blue restricted to a relatively narrow median area. — **erica** *Fruhst.*, from the Lower Amazon, differs from typi- *erica.* cal specimens in the constantly narrower, silver-white reticulation of the under surface. Flies at Obidos in August—September. — **neoptolemus** *Wood.* Basal part of both wings black-brown, only distally with slight *neoptolemus.* dark blue sheen. ♀: the blue median band of both wings broader, darker but more glossy blue than in *deidamia* from Surinam and Obidos. Under surface with somewhat less extended red submarginal patches, but with more copious white reticulation. From the upper Rio Negro (Uaupes) in coll. FRUHSTORFER, recorded by Dr. HAHNEL from the Upper Amazon. — **hermione** *Röb.* Differs from the typical *deidamia* of the Lower Amazon *hermione.* in having the black distal border much narrower; at the posterior angle of the forewing it is only about 2 mm. in breadth, but gradually widens and at the apex attains a breadth of about 15 mm.; the distal margin of the hindwing is about 3 mm. in breadth in the middle. The ♂ before me has an expanse of 115 mm. The greenish blue median band is about 25 mm. in breadth, with its proximal boundary sharp and almost straight, the distal indistinct. The dark brown basal part is about 18 mm. in breadth and has only in the distal third a dark blue gloss. In the apex of the forewing are placed 2 small, distinct white spots and 1 very indistinct light one. At the costal margin of the forewing there is a small white spot. At the inner angle of the hindwing there are only traces of small reddish spots. The under surface is dark mahogany-brown, on the hindwing somewhat lighter about the veins, the light markings are in shape almost like those of *deidamia*, but are much less developed (narrower) and of the submarginal brick-red spots of the hindwing only slight traces are present. Type probably from the Cauca Valley. Fassl discovered the ♀ at Villavicencio, East Colombia; it does not differ materially from the ♀ of the preceeding subspecies, but the blue band extends towards the apex beyond the cell of the forewing and in the anal angle of the hindwing. On the under surface the red submarginal patches are nearly suppressed and the silver-white bands are somewhat more delicate than in the *briseis.* *neoptolemus* ♀. — **briseis** *Fldr.* (= pyrrhus *Stgr.*) describes a further, much darkened local race from the Chanchamayo and Hillapani in Peru, which likewise lacks the blue gloss on the black basal area of both wings, but differs from the ♀♀ of *neoptolemus* in having a more extended blue median area. Very rare, only known in the ♂. *electra.* — **electra** *Röb.* is a highly specialized local form from Bolivia with the hindwing decidedly more rounded and the forewing shorter. The upper surface is brilliant light blue, in certain lights with greenish gloss. The black distal margin very narrow, at the hinder angle of the forewing only about 2 mm. and at the apex about 10 mm., in the middle of the hindwing about 3 mm. in breadth. In the apex of the forewing are placed 2 white spots; the costal margin of the forewing is brown-black from the base to the discocellular, the white costal spot which follows about 10 mm. in length. The base of the wing only very slightly darkened. Under surface dark red-brown; the form of the light markings quite similar to those of *deidamia*, but the eye-spots much smaller, margined with red-yellow (as in *M. granadensis Fldr.*, but the subapical eye-spot of the hindwing is considerably larger in the latter), the distal-marginal markings are white (not yellow as in *deidamia*), the proximal silver-white markings reduced, less continuous, and at the distal margin of the hindwing there are only small, narrow red longitudinal spots (no transverse band).

M. portis is the oldest name for a pretty species, which has generally found its way into collections under the name *cytheris Godt.* *portis* may be regarded as the type of a small group which embraces species with the sexes alike, in contrast to the forms of the *adonis* group with highly differentiated, heterochromatic ♀♀. *portis.* Two subspecies can be separated with certainty. — **portis** *Hbn.* (68 a) according to von Bönninghausen is never found in the plains, but only at higher elevations of the Sierra Geral, as at Petropolis and Novo Friburgo in the state of Rio de Janeiro, where it is by no means common. The upper surface differs from that of the southern branch-race in its unusually delicate light blue colour, shot throughout with glossy reflections, and which *sidera.* only distally darkens somewhat towards violet. **sidera** *Fruhst.* demotes a form without apical ocellus on the underside of the hindwing, which bears pale yellow instead of reddish brown longitudinal bands on an unusually *thamyris.* light ground and in addition has the silver bands nearly twice as broad as in normal *portis.* — **thamyris** *Fldr.*, sufficiently characterized by the broader black border of the forewing and the darker blue gloss of the upper surface, bears beneath somewhat larger and more uniform ocelli, broader and more intensively red-brown longitudinal bands and consequently reduced silver stripes. The ♀ is rather rare, larger than the ♂, adorned with larger anteterminal and submarginal white crescents and small longitudinal stripes and with the wings more rounded. This elegant Morphid is very local in Sta. Catharina, but common in suitable localities (timber-forests overgrown with bamboo and intersected by large rivers). *thamyris* flies chiefly in the afternoon from 3—4 o'clock, when *Morpho anaxibia* is already disappearing into the shade of the woods. The butterflies fly slowly, scarcely 1—2 mm. above the ground, and are fond of resting with closed wings on bamboo-twigs. Also on the highlying country of Lages I met with *thamyris* in the damp woods of the valleys and the primeval forests on the Alto Uruguay. Flies principally in March. In Rio Grande according to Mabilde two generations occur, the first flying for 15—20 days in the spring, the second for nearly a month in the autumn. — *psyche.* **psyche** *Fldr.*, of which I have the type before me through the kindness of the directors of the Tring Museum, seems to be due to discoloration. Upper surface darker blue than in *portis*; distal border of the forewing broader, more uniform. Under surface: ocelli as in *portis*, but the silvery longitudinal band suppressed, the wings themselves faded into a lighter brown. Brazil.

lympharis. **M. lympharis** *Btlr.* replaces *M. portis* in the Andean region, but has hitherto only been found in Peru and was described from Pucartambo. ♂ above somewhat darker blue than *M. aega* and with subapical white punctiform spots on the forewing. Underside of both wings with three ocelli, of which the apical and the two intermediate ones are elongate-oval in shape. Otherwise as *M. portis Hbn.*

M. sulkowskyi agrees with *portis* in its preference for the mountains and it is said to occur principally in the "tierra templada" of Colombia and Peru, where it ascends to 1—2000 m., and in Colombia is also met with on the tablelands. *sulkowskyi* is a notable species with strikingly thin scales, delicate light blue but with such a brilliant reflection that it is only surpassed by *M. rhetenor* and *M. cypris*. When viewed from the side the forewing shows further a violet tinge over the blue reflections. Three local races have hitherto been made *sulkowskyi.* known: **sulkowskyi** *Koll.* (68 a), from Colombia. ♂ only blackened at the apex of the forewing and the anal angle of the hindwing, ♀ on both wings with black or brown distal border, which on the hindwing is divided by a pale yellow band. In the black anal spot of the hindwing in both sexes three dull bordeaux-red patches.

Under surface very similar to that of *portis*, but with chains of connected ocelli and very large apical eye-spot on the hindwing. The longitudinal bands of the under surface in the ♂ either blackish or reddish, in the ♀ a beautiful red-brown. According to recent observations made in the Central Cordillera of Colombia it sails along proudly in the middle of a crowd of black Satyrids on grassy mountain-slopes on the road to the Quindiu Pass. Difficult to catch, particularly in good condition; also occurring in the East Cordillera from 2—3000 m. — **zephyritis** *Btlr.* (on Butler's plate in Lepid. Exotica erroneously called *lympharis*) was described from *zephyritis.* Huasampillo in Peru. As a rule somewhat larger than *sulkowskyi* and with the longitudinal bands blackish and somewhat broader than in Colombian examples. The ocelli on the underside of the hindwing connected. The bands of the under surface showing through more clearly above, the submarginal band in particular standing out very sharply. I have examples before me from Pozuzo and Huancabamba, Central Peru, 1500 m. — **eros** *subsp. nov.* (*Stgr. i. l.*). Wings somewhat shorter, broader, with the black apical bordering much widened, *eros.* on the other hand the hindwing without any black distal border. Upper surface with yellowish opalescent gloss, under surface with yellowish brown, more diffuse markings. Apical ocellus of the hindwing placed free. Bolivia, South-East Peru. *sulkowskyi* has recently been discovered also in Ecuador and the local form from there described as **sirene** *Niep. sirene* is said to be considerably larger than the race from Colombia, length *sirene.* of the forewing 60 against 55 mm. Wing-contour sharper, apex and inner angle of the forewing angled instead of rounded. The mother-of-pearl gloss more intensive and pure blue, without greenish admixture as in *sulkowskyi* and *eros*. Under surface white with somewhat more strongly marked bands.

M. rhodopteron *Godm.*, from the Sierra Nevada in Venezuela, apparently represents *sulkowskyi* there, *rhodopteron.* comes very near this in size, but bears only one instead of three ocelli on the underside of the forewing and three isolated, not connected as in *sulkowskyi*, rounded eye-spots on the hindwing. Very rare, only known to me from the figure.

M. aurora agrees with *portis Hbn.* in the shape of the wings and the arrangement of the black distal spots. Upper surface with light blue, distally darkening gloss. Under surface grey-white, with mother-of-pearl gloss, basal area purple. The ocelli show through distinctly above and are yellow in the middle, with white crescents and sharply ringed with black. On the forewing four or five, on the hindwing always four eye-spots, the apical one sometimes doubled, being accompanied anteriorly by a halved eye-spot. The species flies rather high; Garlepp met with it at Cocapata in Bolivia at elevations of about 2600 m. The ♀ still awaits discovery. Two geographical races: **aureola** *subsp. nov.* (66 c as *aurora*), apparently not rare at Pozuzo and *aureola.* Chanchamayo, is somewhat smaller and darker than the Bolivian sister-form, **aurora** *Westw.*, which according *aurora.* to Staudinger also (Iris 1894, p. 72) is notable for its relatively large size. *aurora* seems to be rarer than the Peruvian *aureola*.

M. adonis, the longest known species of a small group, is transitional from the *portis* series to the *rhetenor* group, and with it begins at the same time the series of species in which the Morphid character reaches its highest development, accompanied by a striking sexual dimorphism such as we find nowhere else in the Satyromorphids and which is only surpassed by a few Papilionids and Nymphalids. — **adonis** *Cr.* (= eugenia *adonis.* *Deyr.* ♂) (68 a), originally described from Surinam, inhabits Guiana and the northern bank of the Amazon. Deyrolle had it from the River Oyapok on the borders of Cayenne and Brazilian Guiana, Michaelis found it at Obidos on the lower course of the river, Dr. Koch on the Upper Rio Negro, Dr. Hahnel reports its capture at Iquitos and Pebas. There *adonis* flies quickly and impetuously (sometimes at an elevation of 12 ft.), dashing out from among the branches, crossing the road and following clearings among the trees, in which they sail along just over the tops or in and out among the branches. The ♂ resembles the generally known *aega* (66 b) above, but the blue is duller and lighter. Forewing also above with the two white costal spots which our figure of the underside reproduces and with less black at the apex. — In **adonides** *Stgr.*, an aberration from Iquitos, *adonides.* however, these white patches are absent, and the white stripes of the under surface are more blurred, nearly effaced. The ♀ is much larger with the basal part of both wings above black-brown, and has extended yellowish white, proximally strongly dentate longitudinal bands. The under surface is predominantly silver-white with pure white median area, reddish anteterminal band and the ocelli ringed with brilliant yellow. It was figured as long ago as 1785 as *marcus Schaller*, afterwards rechristened *urania* by Deyrolle, and Kirby is not altogether to be blamed for having referred the ♀, from Schaller's figure, to the Zeuxidiids, to which it shows a superficial resemblance.

M. uraneis *Bates* is an extraordinarily rare species; in addition to the type only three examples seem to *uraneis.* be known, which were collected by Dr. Hahnel at Iquitos and Pebas. According to Staudinger *uraneis* has the upper surface blue with brilliant mother-of-pearl gloss and is larger and broader-winged. Its flight is more regular and not so rapid as that of *adonis*.

M. aega, one of the best known and in the ♂ one of the commonest Morphids, shows a tendency, within its relatively narrow range of distribution, to interesting geographical variation. The name-type, **aega** *aega.*

Hbn. (66 b), probably came from the state of Rio de Janeiro, although according to von Bönninghausen the species does not occur in the town of Rio itself, but only in the north-west of the province of this name, and is probably distributed as far as Sta. Catharina. The ♀ was first figured by Staudinger; it differs from our figure (*mellinia*, 66 b) in the darker colouring, the smaller transcellular patches of the forewing and the far *mellinia.* larger submarginal spots of the hindwing. — **mellinia** *Fruhst.* differs from ♀♀ from Rio de Janeiro in the more extended black border of both wings and the much more broadly black thickening of the veins of the forewing. In addition on the forewing in the broader black spot at the apex of the cell and the larger yellow circumcellular patches. Lower median at its base, submedian in the middle, bordered with broad patches of black scales. The hindwing darker red-brown. Distal border more broadly black with the yellowish rounded *bisanthe.* patches considerably smaller. — **bisanthe** *Fruhst.* (66 b), with the type from Sta. Catharina, describes the southern form of the collective species, in the ♀ recognizable at once by the almost uniformly large yellowish submarginal spots, which mostly extend from the anal angle to the apex, whilst in *aega* and *mellinia* they do not reach beyond the median part of the forewing. The circumcellular spots are larger and lighter. The black spot before the apex is narrower, more diffuse, and only extends to the middle of the anterior wall of the cell. The ground-colour of the yellow ♀♀ much paler, on the hindwing without brown tinge; the submarginal patches of the forewing more uniform, forming a more complete row. The ♀♀ are among the most variable Morphids and three principal forms may be distinguished, including the normal (most commonly occurring), predominantly brown-yellow ♀, analogous to that of *mellinia*, and probably the ancestral form, still recalling the Brassolids, *mixta.* thus phyletically the oldest. Besides this we have **mixta** *Fruhst.*, with partial blue reflections on the forewing *pseudocypris.* (66 b), and finally **pseudocypris** *Fruhst.* (66 c), in which the yellow-brown gives place to a dark or light blue, which overspreads the whole upper surface. Whilst the ♂♂ before me from Rio de Janeiro, Paranâ and Blumenau show *inter se* no differences worth mentioning, the ♂♂ of *bisanthe* from Rio Grande do Sul can be at once separated from their more northern representatives by the predominantly white-grey instead of purple-brown under surface, which in addition is traversed by more sharply defined, i. e. more strongly black-bordered and consequently more distinct, grey-white or pale yellow longitudinal bands. Also the *bisanthe* ♀♀ are paler yellow beneath and in the form *pseudocypris* with more prominent light areas than in *mellinia.* Thus in the north Espiritu Santo with an almost uniform hot, damp climate all the year round, which produces a continuous, vast forest area covering the still almost unknown interior of the province, has a deep-coloured, one might say rainy-season form. Rio Grande do Sul, on the contrary, with pronounced separation of the seasons and great extremes in temperature, produces, on account of the dry prairies extending from Argentina, which restrict the primeval forest to a relatively narrow tract in the eastern slopes of the coast-mountains, a pale race with all the characteristics of a product of a dry region. Mabilde says that *bisanthe* occurs for 10—15 days in the spring and 20—40 days in the autumn on forest-paths. Of the rare ♀♀ about 10—15 are found to 1000 ♂♂. Burmeister knew an *aega* race with blue ♀♀ from the Missiones in the state of Argentina, discovered there by Carlos Berg.

M. rhetenor, already named by Cramer the "blue elongate Atlas butterfly", has the apex of the forewing more produced than any other Morphid species; a characteristic, however, that partially disappears in the ♀, which more resembles that of *cypris.* The ♂ is one of the most brilliantly glossy species and has only a quite inconsiderable black apical spot and a white costal patch on the forewing. The under surface is noteworthy for the contrast between the black basal area and a brown distal region, which are separated by a median band of a more or less pure white and of varying extent according to the locality. Both wings *rhetenor.* beneath show brown rounded eye-spots entirely without white pupils. — **rhetenor** *Cr.* (68 b) inhabits Guiana and its ♂♂ are much smaller than those from other localities. The under surface of the ♂♂ must at the same time be described as the dullest in colour. The eye-spots of the hindwing remain light red-brown and the median area is dull grey. The very rare ♀, which we figure from an example in coll. Fruhstorfer, exceeds the ♂ in expanse and is striking chiefly on account of the contrast of the deep velvety brown cell in the fore*eusebes.* wing and of the submarginal area against the ochreous median area. — **eusebes** *Fruhst.* inhabits the Amazon region, where Michaelis observed it at Obidos in August and September, and Dr. Hahnel at Iquitos and Jurimaguas. According to Dr. Hahnel (Iris 1890, p. 235) *eusebes* always flies at a great height and energetically, mounting from 3 to 6 m. with an undulating flight, and can only occasionally be attracted to fly down on to wings of *Morpho menelaus* laid on the ground. The ♀ settles on wet places on the banks of rivers (a habit which I also observed in *M. anaxibia* in Sta. Catharina). When disturbed they only fly away slowly, in contrast to the ♂♂. The ♂♂ emit a smell of sulphur (Hahnel l. c., p. 308). ♂ considerably larger than *rhetenor rhetenor Cr.* from Surinam, with the black at the apex of the forewing somewhat more extended and with the first beginnings of the yellow spotting which distinguishes *cacica Stgr.* Under surface brighter, fresher-coloured, with more delicate grey-white median area and more distinct, darker brown, incomplete ocelli on the hindwing. A comparison of the figure of our *rhetenor* ♀ with that of *eusebes* ♀ given by Staudinger, Exot. Schmetterlinge pl. 70, shows the following differences: ground-colour of the *eusebes* ♀ light, almost canary-yellow, without any brown admixture. Transcellular spot nearly twice as broad, all the distal patches likewise more intensive and finer yellow, isolated, and divided into two instead of three rows as in *rhetenor.*

cacica. — **cacica** *Stgr.*, described from the Chanchamayo in South Peru, is connected with *eusebes* by transitions which occur already on the Upper Amazon. The type is characterized by a median row of four or five whitish yellow intramedian spots, sometimes also in addition some similar spots before the distal margin. The under surface of the hindwing shows a very narrow brown transverse band, which encloses the dark brown ocelli and is not broadened posteriorly as in *eusebes* and *rhetenor*. ♀ apparently still unknown. — *helena.* **helena** *Stgr.*, a very distinct geographical race almost entitled to specific rank; upper surface much nearer to *cypris Westw.* than to *rhetenor*, only differing essentially from the former in the absence of the yellow submarginal markings on both wings and in having the produced apex of the forewing (so characteristic of *rhetenor*) even more strongly developed than in *eusebes*. The median band of the under surface, which is dull grey in the other representatives of *rhetenor*, is in *helena* pure white, broad and traverses the forewing from the apex of the cell, the hindwing for its entire length. Much, however, as the ♂♂ differ from *rhetenor* type in the metallic iridescence of the median band, the ♀ of *helena* nevertheless remains constant and apparently scarcely differs more than *rhetenor* ♀ from the ♀ of the Amazon form *eusebes*. It is larger than *eusebes* ♀, but has the yellow areas of the forewing quite as extended and the submarginal patches on the upperside of the hindwing more strongly marked, but likewise arranged in three parallel rows. The under surface of the forewing somewhat duller than in *eusebes*, the hindwing predominantly grey and in the median area nearly pure white instead of yellowish. The ♂♂ came from the Rio Huayabamba near its union with the Huallaga, in North Peru; the ♀ was discovered at Tarapoto in October, 1901, by the well-known collector Michael, who sent a coloured drawing of it on which our diagnosis is based. Only yellow ♀♀ are known, but it is very probable that, as in all the species of the *adonis-rhetenor* group, ♀♀ tinged with blue will also be discovered.

M. cypris replaces *rhetenor* in Colombia and Central America and one might strictly speaking unite it with the latter as a geographical branch unless the anatomy shows essential differences. *cypris* is here, however, kept separate on account of the rounded shape of the forewing and the somewhat more vertically placed white median band of the upper surface. *cypris* and *helena* outshine even the other Morphids in their incomparable gloss and *cypris* in particular is a true gem, unequalled in its brilliance throughout the whole of nature (Schatz). According to the fall of the light the blue of this incomparable insect shows a more violet or more greenish gloss and the delicate white band a yellowish tone or more of a tinge of rose-colour. The blue is of such etherial purity and such intensive lustre that all the other colours appear faded or dull in comparison. Only the Malayo-Australian Ornithoptera can outrival the Morphids, adding as they do to the brilliance of their golden green colouring the further charm of a quite distinguished form and wing-contour. The scaling itself, as in *rhetenor*, remains fixed, but the interference scales are wanting in the normal ♀♀, so that these are of the primitive yellowish ochreous (Brassolid) ground-colour common to all the species of the *adonis* group. Two local varieties: *cypris.* **cypris** *Westw.* (68 a ♂, b ♀). The ♂♂ are scarcely modified and the ♀ differs from that of *rhetenor* in the more distinctly isolated yellow submarginal patches and a yellow diffuse spot in the cell of the forewing. On the under surface both sexes bear in addition, especially on the hindwing, fully developed ocelli with deep yellow rings and white pupils, instead of the blind brown patches of *rhetenor*. The ♂♂ otherwise resemble those of *rhetenor* beneath, but the brown bands always remain paler; median area white in the ♂♂, yellowish in the ♀♀, on the forewing extending without interruption to the costal margin. Of the ♀ examples are also known which are shot with brilliant blue like the ♂♂ (*cyanites.* **cyanites** *form. nov.*), but in these the blue reflection always leaves free a rather broad brown distal margin. Colombia, principal locality the vicinity of the emerald mines of Muzo, from whence *cypris* is brought to Bogotá for sale as "mariposa de Muzo". — *bugaba.* **bugaba** *Stgr.*, from the Volcan de Chiriqui, is distinguished from Colombian examples by the more extended white median band, smaller size and darker under surface. According to Godman and Salvin specimens of *cypris* from Nicaragua are almost identical with Colombian, but ♂♂ from Panama are again much smaller with narrower bands. The butterflies fly at a great height in the clearings which have been made in the woods for the Panama railway.

anaxibia. **M. anaxibia** *Esp.* (69 c) may be regarded as one of the characteristic butterflies of southern Brazil. The species stands quite alone in having the abdomen blue above, but forms a transition from the *rhetenor* to the *menelaus* group. *anaxibia*, however, lacks the wonderful gloss of the *rhetenor* series, the blue is duller, although it has its own particular beauty, and the dazzling iridescence is wanting. The ♂ still suggests *rhetenor* in the under surface, the ♀ reveals more connection with the *menelaus* group, but its marginal spots are yellow instead of white. The ♂ bears a narrow black costal border, which is inappreciably widened at the apex and then continued to the hinder angle of the forewing as a proximally more or less dentate distal border. Beyond the cell there is a white patch at the costal margin, but in examples from Blumenau this is frequently absent. The forewing is predominantly black beneath, the hindwing red-brown, respectively with two to three and four to five medium-sized eye-spots, slightly pupilled with white and mostly ringed with light grey-yellow. The under surface of the ♀ is more variegated, marked with slightly glossy broad grey zigzag bands and patches. The ♀ varies above in the white, delicately blue-dusted transcellular patch of the forewing, which may be composed of only one (Paranâ) or of three divisions. In the extreme south of its range, in Rio Grande do Sul, *pelias.* occurs a small form, **pelias** *subsp. nov.* (69 c), the ♂ of which is decidedly lighter above, more whitish blue; the ♀ has somewhat more distinct white median dots on the forewing and more strongly marked yellow spots in the submarginal area of the hindwing also. The ♂ is coloured more like the ♀ beneath, without the contrasting grey areas of the Blumenau form and without the uniform brown-yellow of the ♀♀ from Espiritu Santo. The latter locality is new for *anaxibia*; in STAUDINGER's time Rio de Janeiro was regarded as the most northern point of its occurrence. According to MABILDE it flies for 15—30 days at the end of January and beginning of February and the time of flight only occasionally extends to the end of March. I myself observed *anaxibia* in large numbers in Santa Catharina, in February, particularly in a side valley of the Capivary River. Here a crystal waterfall sprinkled the roots of the forest giants and thus provided a centre of attraction for butterflies of all sorts. As a wild beast seeks out certain set tracks in order to reach the water, so *anaxibia* also haunts this spot daily, following up accidental clearings in order to gain the cascade, as if they also sought there for cooling refreshment among the softly rustling arches of the tall bamboos shaken and bedewed by the foaming water. They did not arrive in companies but singly, sailing quietly along, but nevertheless after heavy rain the sand-banks before the rocks of the river were strewed with the glittering blue wings of dead *anaxibia* and *aega* which the water washed up. The ♀ is extraordinarily rare and on hot days rests in the morning hours with the wings closed in wet places in the forest-paths where it can imbibe the moisture. It is then so well concealed by the red under surface, which differs but little from the surrounding ground, that it is usually only noticed by the collector when it is too late. According to VON BÖNNINGHAUSEN *anaxibia* is common in March on the Corcovado. — Larva on Canella and one of the Myrtaceae "Grumexama", elongate, appreciably thickened in the middle, head with two lateral, not very distinctly projecting tubercles with long bristles. Head shining yellowish horn-colour, covered with small rounded pitting and dots, with fine white hairs and with strong red-brown bristles. Body yellow, sides densely clothed with fine woolly hairs, back gaily coloured, the first two segments finely haired, on the third to the sixth segment long lateral tufts of bristles, then a varied mixture of black, bordeaux-red and white. The 5th and 6th segments naked, the 7th and 8th with a St. Andrew's cross-shaped figure, the four ends of which are adorned with gay tufts of bristles. Anus with two lateral bunches of bristles and the beginning of the last segment, like the anterior ones, armed with brightly coloured hairs. Over the back runs a rather broad band with the inner edge distinct, the outer broken up into marbling. All the segments further with a double red lateral line. Underside with red-brown patches between the legs. Pupa posteriorly strongly swollen, short, light green with yellowish wing-cases and sharply defined yellow-white ring shortly behind the thickest part of the body. Head with two fine, pointed black horns; in general smaller, weaker, slighter than those of *Morpho hercules Dalm.* In the yellowish ring the pupa of *anaxibia* also differs from that of *M. catenarius Perty.* In Sta. Catharina pupation takes place approximately from the 15th of January to the 1st of March.

M. menelaus, one of the historic species, received its illustrious name from LINNÉ and well deserves it on account of its imposing size, which gives it a preeminence comparable to that of that hero of ancient mythology. *menelaus* has at the same time a very wide area of distribution, for its numerous branches have spread over the entire tropical region and we meet with them from Guiana to Santa Catharina and on the Pacific side from Colombia to the lowlands of Bolivia, so that its range about agrees with that of *M. achilles* and *achillaena.* In Colombia a new branch has developed from the old stirps, producing in *amathonte Deyr.* a representative form which almost claims rank as a species. In contrast to *achilles*, however, which towards the south decreases in size and loses in beauty, it is in its subtropical representatives *nestira* and *godarti* that *menelaus* attains the maximum of its development and of its brilliance. Its extremes of variation are illustrated by our figures 69 c and b for the ♂♂ and 71 b and 70 b for the ♀♀. On the under surface all the *menelaus* forms agree in having the ocelli ringed with red, while in *amathonte* they are bordered with yellow. According to the locality the intensity of the proximal bordering of the ocelli varies, from a dull bronze-green tinge nearly to glossy silver-white. Equally variable is the colour of the submarginal area of both wings, which may be dull grey, greenish purple and even vinous. ♀ always considerably larger than the ♂, with more or less copious white dots and median bands on the forewing. ♀♀ not so extremely rare as those of the *adonis-rhetenor* group. Concerning the early stages nothing further is known than that the egg is about 2 mm. in diameter, hemispherical, not shining but dull grey-white and somewhat transparent. The ♀ probably lays about 2 dozen of these disproportionately large eggs, and oviposition seems to proceed slowly. Tegumen with relatively shortened uncus, which is strikingly thickened basally and has an abruptly marked-off, chitinized, sharp point and two finger-shaped, uniformly thick lateral processes. Valve rounded, broad with distally chitinized pad, which shows a few larger and many small teeth. Valve distally with long bristles. Penis long, membranous, without the pronounced teeth of the *M. achilles* group. *menelaus* leaves its nightly hiding-place as early as 8 o'clock in the morning, when the sun is only beginning to send its rays obliquely through the leaf [illegible] thing of the forest giants, and commences to sail along in great undulating sweeps. Against the dark gree[illegible] huge butterfly appears even larger when in motion and the magnificent play of colours of the upper surface is perfected by the silvery decoration of the under. When the ♂♂ come upon an open track they follow it impetuously, as if to give free scope to their powers of flight. The ♀♀ awake much later than their suitors, as a rule not until towards midday. Their flight is then, however, not continuous like that of the light-winged ♂♂, but sluggish, aimless, heavy, as if in a dream, and it alternates with frequent pauses for rest, quite in the manner of some lost, frightened creature, driven by unconscious impulses. But when they have paired and are disturbed by the collector an interesting scene ensues, the huge ♀ flutters heavily about with its inert partner until it has again obtained a foothold. The rose-tinted under surface of the ♀, with its large ocelli, contrasts with the much darker one of the ♂ and is admirably concealed from the prying eyes of enemies in the shadow of the foliage or the confusion of brown, withered leaves. In contrast to *rhetenor* and the species of the *iphimedeia* group, however, *menelaus* keeps nearer to the ground, and according to Dr. Hahnel it even abandons its aimless jerky movements when it passes over rivers, in the consciousness of safety which the wet element under it affords. The remarkable impression which the Morphids call forth in European travellers seems to be shared by the natives, only with this difference, that they see in them nothing attractive, but associate them in their ideas with the embodiment of malevolent spirits. According to Dr. Koch-Grünberg (Two Years among the Indians, Berlin 1910) the large azure-blue butterfly „Tataloko", which enchants the eye with its brilliant colouring and looks like a little piece of the sky come down, is one of the most dangerous demons. It has its abode in Yurupary Cachoeira, the first and highest of the multitude of falls and rapids in the Rio Caiary-Uaupes, where it brews malaria in a large pot, so that all who drink of the water fall sick. As a matter of fact Dr. Koch had personal experience that malaria does occur on this otherwise healthy river above the cataract, in consequence of the quite different, white, almost stagnant water there. The mask of the butterfly, which the natives put on in the „Morpho" dance, is well characterized by the wickerwork wings, painted with gay patterns, which are attached to both sides of the body, and by the curved proboscis composed of Cipo (a climbing plant) *). The zigzag marking on the breast of the mask indicates the fluttering of the butterfly. The dancer holds in one hand the symbol of the pernicious activities of his demon, the drinking-cup, on which he beats time with a small stick. — *menelaus.* **menelaus** *L.* (69 c ♂, 71 b ♀), the name-type, is at the same time the smallest race of the collective species; the ♀ was named *nestor* by Cramer, a name which by oversight has been transferred to the ♂ on our plate. As may be seen from the figure, the ♂ is pale blue, but with extremely intensive reflections. The ♀ has only quite small white discal patches and the white spots on the discocellular are less developed than in the other races. Surinam, apparently not very common, as my collector Michaelis during his two visits there only handed over quite a few examples. — *terrestris.* **terrestris** *Btlr.* is the geographical race from the Lower Amazon, first made known from Villa Nova (the present Villa Bella); its under surface is cinnamon-brown with somewhat more pronounced rows of bronze-green spots proximally to the small ocelli, which in the ♀ are placed in a white foreground. ♂ above already somewhat more broadly bordered with black than *menelaus* from Guiana; ♀ with the subapical patches on the forewing prolonged and the white transcellular band considerably broader and also extending further towards the middle of the wing. From Obidos in my collection. As *melanippe.* **melanippe** *Btlr.* an aberration was described with only one eye-spot on the underside of the forewing. — *melacheilus.* **melacheilus** *Stgr.* The black bordering of the ♂♂ is already essentially widened and in the ♀, although the proximal decoration of the ocelli on the under surface is considerably enlarged and assumes a light silvery gloss, yet on the upper surface the blue is so much reduced that only a narrow median area of it persists (much as in *M. achilles*) and the entire basal area is again occupied by the black ground-colour. There is also a corresponding reduction of the white transcellular spot of the forewing. Upper Amazon as far as Iquitos. — *occidentalis.* **occidentalis** *Fldr.* is a further local form, which I formerly regarded as identical with *melacheilus*, but examples entirely discovered by A. H. Fassl have shown me that both sexes differ beneath from *melacheilus* in the broad median bands of both wings, which in the ♂ are bronze-green, but in the ♀ brilliantly silvery and esentally widened. The markings of the upperside in the ♀ indicate a retrogression to the name-type and *occidentalis* ♀ only differs from Surinam examples in its smaller size and the somewhat more pronounced white spots. Base of the wings as in *terrestris,* dark blue with violet reflections, but not black as in *melacheilus.* Upper Rio Negro from about 800 m. According to Dr. Hahnel *occidentalis* flies all the year round. — *nestira.* **nestira** *Hbn.* designates the handsome Brazilian branch-race, of which Hübner figures a ♂ with dark upper surface and very broad black apical and distal bordering on the forewing. As just such examples occur in Santa Catharina it may be assumed that the type came from the southern provinces of the country. — Larva according to Dr. Wilhelm Müller with a pattern in the last stadium which betrays the closest relationship to that of *Morpho achillides* in its first. The light spots in the medio-dorsal line are almost entirely suppressed. Ground-colour of the body liver-brown mixed with black, two large yellow-green, dark-edged spots in the middle of the dorsum.

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*) Dance-masks of this sort are exhibited in the very rich South American section of the Museum of Ethnology in Berlin, of which Koch's celebrated collection constitues not only the most richly coloured but also the best preserved and labelled part.

The tufts of bristles predominantly black, at the anterior margin white. — In Rio de Janeiro, on the other *tenuilimbata.* hand, occurs a form with the distal margin quite considerably reduced, **tenuilimbata** *Fruhst.*, and the ♀♀ from this state are somewhat smaller than those from Blumenau, they are lighter blue, like the ♂♂, the white median band of the forewing traversing the wing to the middle median vein and not so sharply defined. The under surface is altogether less highly coloured, wanting both the copious white dusting and the purple or vinous tinge which adorns *nestira*. *tenuilimbata* is one of the ornaments of the landscape in the neighbourhood of Rio de Janeiro, where it is common in April and May, splendid fresh exemples being met with especially after heavy rains in the gardens of the villas and in the streets at Corcovado. MICHAELIS found *tenuilimbata* a great rarity in Espiritu Santo, and I have recently seen ♂♂ from Matto Grosso. Tegumen with somewhat shorter thumb-shaped lateral protuberances than in *menelaus occidentalis Fldr.*, valve distally more compressed, the dorsal *mineiro.* pad not dentate. *tenuilimbata* leads over to **mineiro** *Fruhst.* (69 b ♂, 70 a ♀), from Minas Geraes. Length of forewing in ♂ 75 mm., in ♀ 83 mm., against ♂ 90 mm., ♀ 98 mm. in *nestira.* A small local form, perhaps only the product of a tract of country in which the dry season is of long duration. ♂ deep blue with the black distal border of both wings very broad, particularly in comparison with its small size. White costal and apical spots reduced. Under surface: forewing: basal part uniform dark brown, distal area with greenish grey scaling. The postdiscal silver spots, mostly prominent in *nestira*, obsolete except for a few atoms. All the ocelli reduced, very small, forewing only with one eye-spot between the medians. ♀: black distal border of both wings broader, more uniform, containing more prominent, rounded (not strigiform) white submarginal dots. The white band on the forewing beyond the cell so obscured by the more intensive and distally extended blue reflection as to be only observable in certain lights. The blue basal tinge on both wings lighter. Under surface: ocelli as in the ♂ much reduced, the crescents on the forewing more open. The silver ornamentation proximally to the ocelli darker, more bronze-colour. Minas Geraes. *mineiro* is analogous to *perseus richardi Fruhst.* (69 a) from the same district and is similarly dwarfed in habitus and in the form of the ocelli. *nestira* apparently does not reach Rio Grande do Sul and also seems unable to subsist in the dry northern provinces, such as Bahia and Pernambuco. Although the species is bred in Blumenau nothing has yet been published concerning the *ornata.* early stages. — **ornata** *subsp. nov.*, named from examples in coll. STAUDINGER, has a broader black distal border, in the ♀, on the other hand, the white submarginal band of the forewing is reduced. From Casa Braca in the province of São Paulo, South Brazil.

M. amathonte, whose specific right has repeatedly and justifiably been called in question, can nevertheless be easily separated from the forms of the *menelaus* series by having the ocelli on the underside ringed with yellow instead of red. The ♂♂ are about intermediate in the shape of the wings between *menelaus* and *didius*, the black apical border as in *menelaus*, the distal margin very narrow, as in *godarti didius*. Distributed *amathonte.* from Colombia to Nicaragua. Splits up into three well differentiated local forms: **amathonte** *Deyr.* is one of the characteristic butterflies of consignments from Muzo, Colombia, and the ♂♂ are never wanting in the so-called "Bogotá lots", which are sold in Germany and England. The ♀, however, is always rare and differs considerably from the ♂. ♂ above lighter blue than *menelaus* with a slight admixture of whitish, recalling *M. adonis*. Under surface somewhat lighter than that of *menelaus* with more copious whitish grey powdering on the submarginal part of both wings. The white pupils of the ocelli on the forewing occupy the distal part of the yellow bordering. The white median band, which characterizes *centralis*, is much shortened, the white dis- *centralis.* cal patches considerably narrower and even more pointed than in the Central American race. — **centralis** *Stgr.* (71 a) is an albinotic geographical form with the ♂♂ even lighter blue and more intensively glossy. The upper surface of the ♀♀ as a rule has the white median bands even broader than our figure shows and traversing the entire forewing. The under surface in both sexes, as also in *amathonte*, of fairly uniform colouring, but in *centralis* strikingly pale yellow-grey with whitish submarginal area on both wings. Occurs from Panama to Nicaragua, mostly represented in collections by the form from Chiriqui, where it is rather common, while at *julanthiscus.* other places it is only met with very sparingly. — **julanthiscus** *Fruhst.* comes from Ecuador and was originally united with *M. didius Hpffr.*: even larger than *didius*, but more approaching *menelaus* and *godarti* in the colouring of the upper surface, having the blue of deeper and duller tone and not opalescent. The under surface is noteworthy for the considerably smaller ocelli, which are placed on a darker ground, the metallic decoration is reduced, rather golden than silvery. All the ocelli with golden bordering. Red antemarginal bands of both wings more intensive and pronounced, as also their black bordering, which is proximally accompanied by a bronze-coloured ornamental band, wanting in *didius*. The transverse bands in the cell of the forewing and the proximal gold crests of the ocelli on the hindwing less conspicuous than in *didius*, more distinct than in *assarpai*. ♀ still unknown. Santa Iuez, Ecuador.

godarti. **M. godarti** *Guér.*, with the name-type from Bolivia, extends northwards to Peru, where it breaks up into one or two local forms, concerning which, in the rarity of specimens, some doubt still exists as to whether they should be joined to one or other of the two species *didius* and *menelaus*. Those forms are here regarded and treated as *godarti* in which the ♀♀ have the cell of the forewing much narrower than those of *didius* and which at the same time approximate more nearly to *menelaus* in the darker blue, slightly violet-tinged upper surface. ♂♂ beneath either predominantly pale milk-white or broadly shaded with red-brown. Of the ♀ there occurs also at Coroico, at elevations of 1200 m., a form with red submarginal spots on the upperside of the forewing. The following two or three branch-races I have had to work out in part from the diagnoses of *alexandra.* their authors and without having seen the originals: — **alexandra** *Hew.*, described without any indication of locality from an example in coll. LABREY of Bowdon near Manchester, decidedly belongs here and not to *anaxibia*, where STAUDINGER, following KIRBY's Catalogue, had placed it. HEWITSON's characterization "Upper surface brilliant silvery blue, changing to pink and distally to brilliant ultramarine blue, purple near the brown distal margin, which bears lunules as well as eye-spots, the latter only showing through faintly from beneath, habitus nearest to *anaxibia*, but with the colour of *Morpho portis* (*cytheris*)" is very apt. So is the extension of the diagnosis in the description of the under surface, which is called "rufous or lilac-white clouded with rufous-brown". The red-brown cell bears in the middle a white (said to be silvery-white) band. Forewing with four, hindwing with six ocelli; black-ringed with white pupils and standing in an unequal silver-white band. I have a ♀ before me from the fine WILLIAM MORTON collection in Lausanne; it shows small white, distally pointed postdiscal and light vinous submarginal spots. The transcellular spot of the forewing in contrast to *didius* short, narrow, only consisting of two component parts. — **alexandrowna** *Druce* is probably the ♂ to *alexandra*, unless it belongs to a subordinate geographical race. ♂ greenish blue with light spot before the apex, below which are placed three faint blue-white patches. Under surface dark chocolate-brown with grey scales near the distal border. Ocelli three times as large as in *menelaus*. The type of *alexandrowna* is in the British Museum. A ♂ in coll. FRUHSTORFER from Pozuzo agrees with the description. — How far a further race from Peru, **assarpai** *Röb.*, can be kept associated with *alexandra-alexandrowna* can only be proved by a comparison of the types. Three ♂♂ in my collection from Pozuzo agree with RÖBER's description; they approach *didius Hpffr.* in the somewhat lighter blue of the upper surface, and the basal area of the hindwing is less extended and more sparsely scaled with grey-green than in the ♂ with dark blue upper surface, which I have referred provisionally to *alexandrowna*. The clasping-organs of *assarpai Röb.* are about intermediate between those of the secondary genitalia of *M. menelaus L.* and *M. didius Hopffr.* Valve somewhat larger and more markedly rounded than that of *menelaus*. Uncus apparently somewhat longer, the thumb-like lateral projections decidedly larger, both in their horizontal and vertical measurements. Uncus on the other hand more slender than that of *didius*, the lateral lamellae less robust and the valve not so fully rounded.

alexandrowna.

assarpai.

M. didius *Hpffr.* approximates to *amathonte Deyr.* from Colombia in certain respects, particularly in its very broadly white-banded ♀, and the two species also agree in the lighter under surface. But the red instead of yellow bordering of the ocelli on the under surface establishes its connection with *M. menelaus*, though it differs from the latter in the strikingly light basal area on the underside of the hindwing and the brilliant silver-white decorations, and not least in the peculiar light blue opalescent reflections on the upperside of both wings. Morphologically it differs less markedly from *menelaus* than in the scheme of colouring and markings. *didius* can, however, in general be separated from *menelaus* by the broader valve, almost fully rounded distally and more regularly and delicately dentate than in *menelaus*. Uncus with the lateral thumb-shaped processes considerably widened. ♂ above characterized by the already mentioned opalescent reflection, peculiar to this species, somewhat suggesting *M. octaviae*, but at the same time brilliantly glossy as in *amathonte*. Distal border of both wings very narrowly black. Under surface of the forewing with three or four light vinous-ringed ocelli. Hindwing with an apical eye-spot between the radials and two intramedian eye-spots, to which is further added a smaller accessory ocellus in the submedian interspace. Forewing with broad silver band and greenish silver transcellular area. Hindwing with a silvery bronzy ornamental band proximally to the ocelli and three detached wedge-spots of the same colour in the subbasal area. The distal region of both wings powdered with white or purple on a yellowish ground. Peru: Chanchamayo; probably also Bolivia. Judging from the ♀♀ in coll. STAUDINGER those from Huayabamba have the most prominent white median band on the upperside of the forewing, while those from Cuzco agree with the typical form from Chanchamayo. As the ♀♀ from Huayabamba also bear the most extended silver-white band on the hindwing beneath, they may be separated as **argentiferus** *subsp. nov.*

didius.

argentiferus.

Addenda to the Morphids.

M. amphitrion p. 336. I have examples before me from Marcapata and Cuzco, Peru, with violet reflections on the upper surface, **azurita** *form. nov.*

azurita.

M. eutropius p. 339. In coll. STAUDINGER there are ♂♂ from Pernambuco, above glittering mother-of-pearl colour, beneath with more marked, more strongly white-pupilled ocelli.

M. argentinus p. 340. There are ♂♂ from Uruguay in the Berlin Museum.

Under **M. patroclus** p. 343 a form should be mentioned, **macrophthalmus** *subsp. nov.*, from Rio San Juan, with gigantic ocelli on the underside of the hindwing, bounded by a bright glossy greenish band. Type from Colombia in coll. STAUDINGER. **microphthalmus** *subsp. nov.* is a further local race from Colombia. Type likewise in the Berlin Museum, with very small ocelli bordered by an indistinct whitish band. The submarginal stripes of both wings a peculiar grey with rosy tinge.

macrophthalmus.

microphthalmus.

M. deidamia p. 347. **praenestina** *subsp. nov.* from Venezuela, from the Atahapo Yarita, discovered by VRAZ. Above darker than *hermione*, recalling *neoptoemus*, thus differing from *deidamia Hbn.* and *erica Fruhst.*, which have a violet base. Upper surface of the forewing almost without white subapical patches; in this again more approaching the Surinam race.

praenestina.

M. zephyritis p. 349. ♀ at the British Museum; above yellow-green, the apex of the forewing broadly black, the hindwing with some orange spots and two black subterminal bands.

M. aurora p. 349. ♀ in coll. ADAM and FRUHSTORFER; has on both wings a black-grey distal border, divided by yellowish lunules and proximally bordered by larger grey-white patches.

M. helena p. 351. From the Tarapoto come smaller ♂♂ with reduced yellow median band, which moreover are copiously dusted with blue. Under surface darker than in the name-type — **chrysides** *subsp. nov.*

chrysides.

M. cypris p. 351. **chrysonicus** *subsp. nov.* has a narrower median area on the forewing and more pronounced submarginal band on the hindwing than *cypris* from Colombia. Venezuela, collected by VRAZ. Type in the Berlin Museum.

chrysonicus.

M. melacheilus p. 353. ♀♀ occur with a remarkable flesh-coloured submarginal tinge on the underside of the hindwing. From São Paulo, Amazons.

Alphabetical List

with reference to the original descriptions of the forms of the American *Morphidae.*

* signifies that the form is also figured at the place cited.

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patroclus M. *Fldr.* Wien. Ent. Mon. 5, p. 110.
paulista M. *Fruhst.* Stett. Zg. 1907 p. 162.
peleides M. *Koll.* Deutsch. Akad. Wien. Math. Cl. 1, p. 356.
peleus M. *Röb.* Societ. Entomol. 17, p. 352.
pelias M. *Fruhst.* Seitz, Macrolep. 5, p. 352. *
pellana M. *Fruhst.* Seitz, Macrolep. 5, p. 342.
perseus M. *Cr.* Papil. Exot. 1, pl. 71. *
phanodemus M. *Hew.* Equat. Lep. p. 32.
phokylides M. *Fruhst.* Seitz, Macrolep. 5, p. 343.
pindarus M. *Fruhst.* Entomol. Zeitschr. 24, p. 193.
polybaptus M. *Btlr.* Ann. Nat. Hist. (4) 15, p. 338.
polyidos M. *Fruhst.* Seitz, Macrolep. 5, p. 339.
polyphemus M. *Dbl. & Hew.* Gen. Diurn. Lep. pl. 55. *
popilius M. *Hpffr.* Stett. Zg. 1874, p. 357.
portis M. *Hbn.* Smlg. Exot. Schmett. *
praenestina M. *Fruhst.* Seitz, Macrolep. 5, p. 355.
pseudocypris M. *Fruhst.* Seitz, Macrolep. 5, p. 346.
psyche M. *Fldr.* Reise Novara Lep. 3, p. 456.

rhetenor M. *Cr.* Pap. Exot. 1, pl. 15. *
rhodopteron M. *Godm. & Salv.* Trans. Ent. Soc. Lond. 1880, p. 130. *
richardus M. *Fruhst.* Entomol. Nachr. 24, p. 62.
rugitaeniatus M. *Fruhst.* Stett. Zg. 68, p. 210.

scipio M. *Fldr.* Reis. Novara Lep. 3, p. 455.
sidera M. *Fruhst.* Stett. Zg. 1907 p. 215.
sirene M. *Niepelt,* Iris 25, p. 122.
sulkowskyi M. *Koll.* Denkschr. Akad. Wien, Math. Cl. 1, p. 355. *
susarion M. *Fruhst.* Seitz, Macrolep. 5, p. 336.

telamon M. *Röb.* Societ. Entomol. 17, p. 351.
tenuilimbata M. *Fruhst.* Stett. Zg. 1907 p. 19.
terrestris M. *Btlr.* Entom. Month. Mag. 2, p. 202.
thamyris M. *Fldr.* Reise Novar. Lep. 3, p. 456.
theodorus M. *Fruhst.* Stett. Zg. 1907 p. 190.
theseus M. *Deyr.* Ann. Soc. Ent. Fr. 1860, p. 213.
thetis M. *Btlr.* Ent. Month. Mag. 2, p. 81.
thiasus M. *Fruhst.* Seitz, Macrolep. 5, p. 336.
trojana M. *Röb.* Societ. Entomol. 17, p. 353.

uraneis M. *Bat.* Journ. Entomol. 2, p. 346.

violaceus M. *Fruhst.* Seitz, Macrolep. 5, p. 342. *
vitrea M. *Btlr.* Ent. Month. Mag. 2, p. 203.

yaritanus M. *Fruhst.* Seitz, Macrolep. 5, p. 336.

zela M. *Fruhst.* Seitz, Macrolep. 5, p. 344.
zephyritis M. *Btlr.* Lepid. Exot. p. 156. *
zonaras M. *Fruhst.* Seitz, Macrolep. 5, p. 344.

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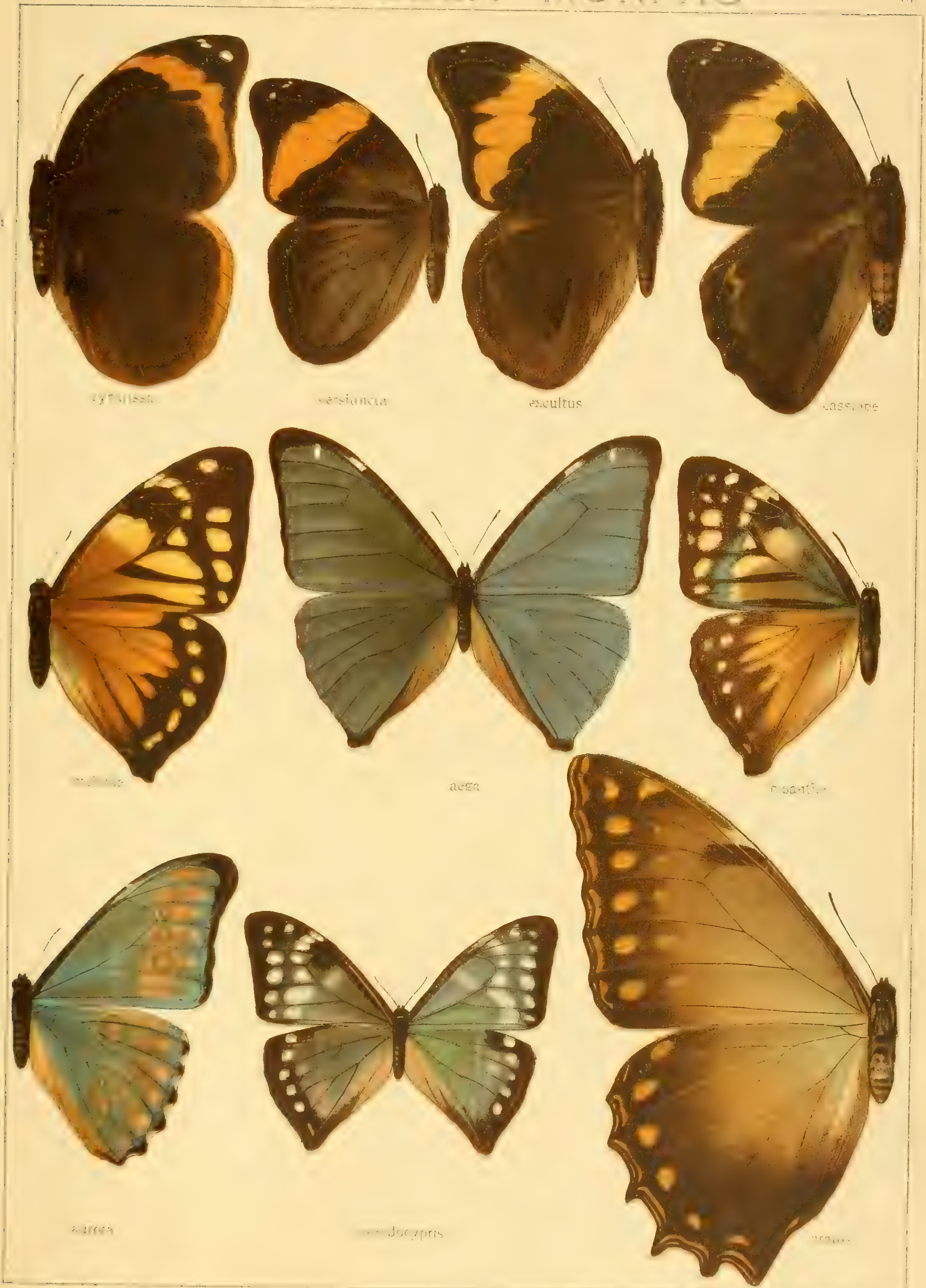
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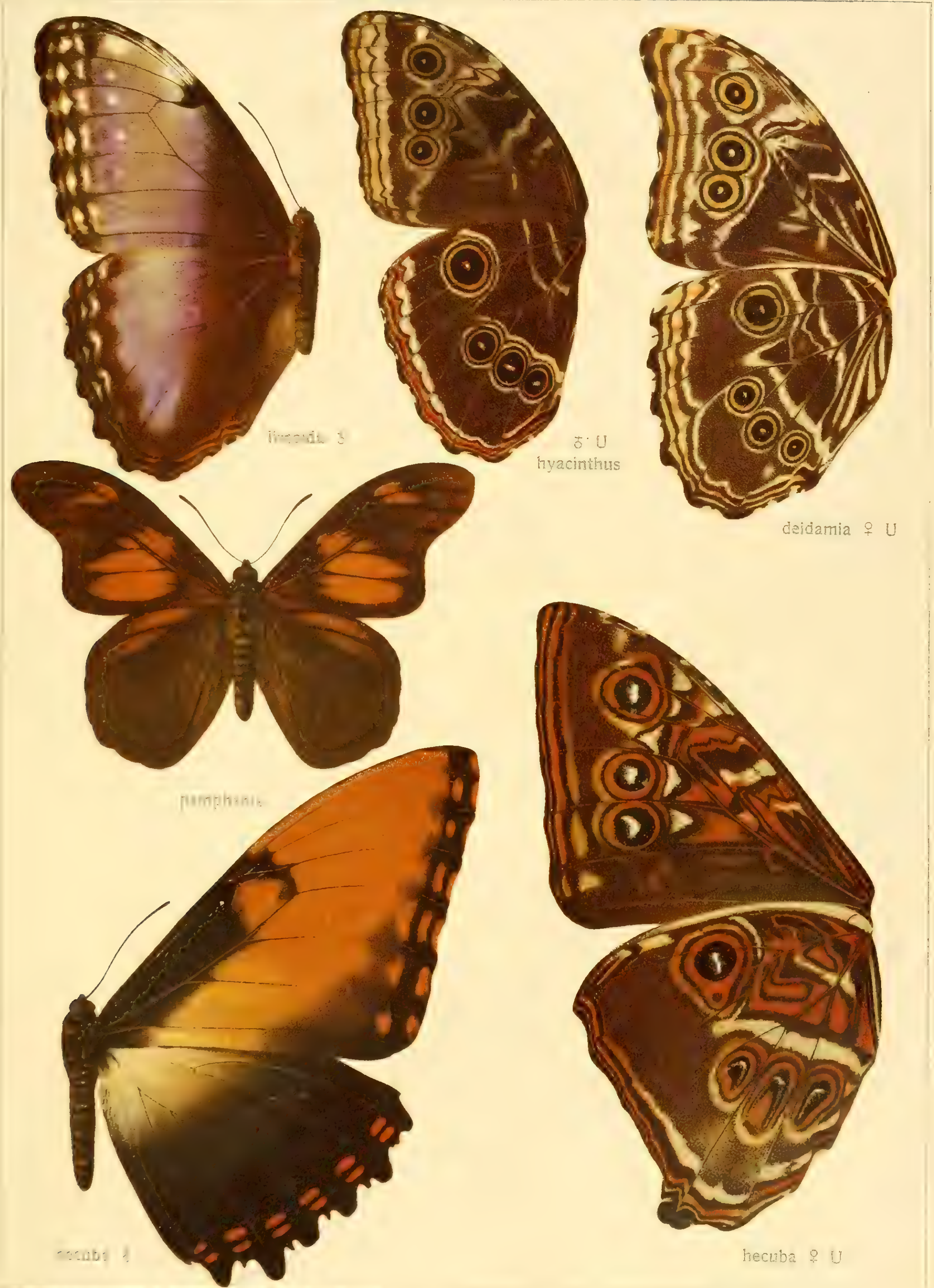
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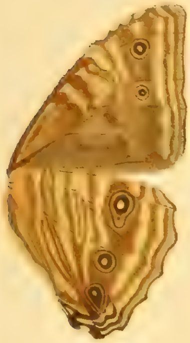
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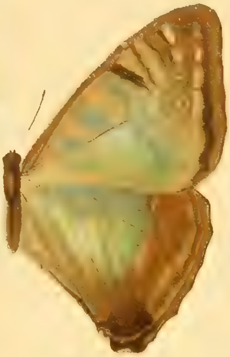
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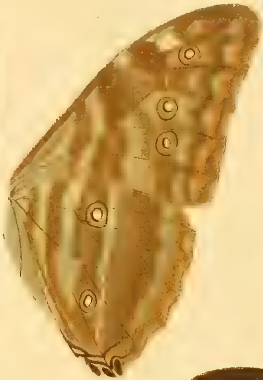
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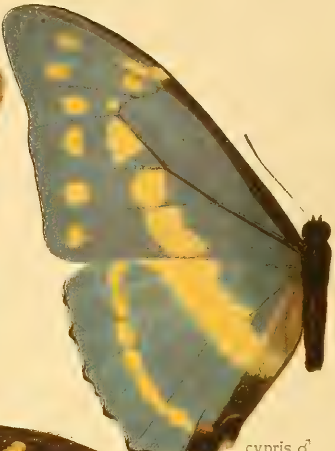
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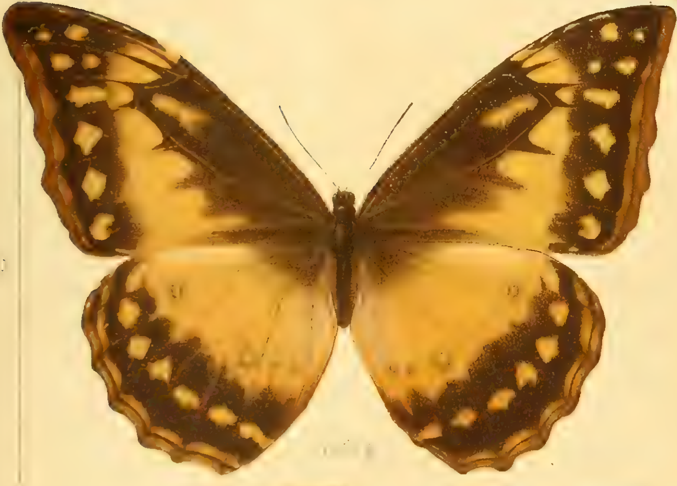
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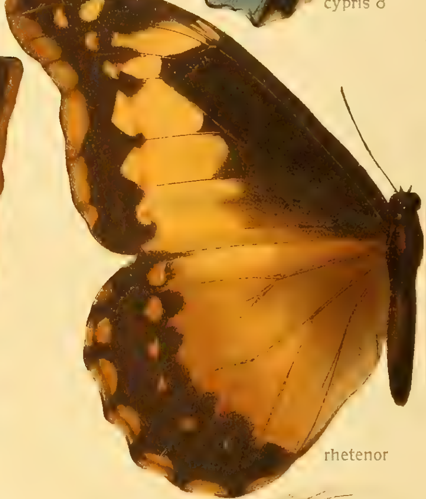
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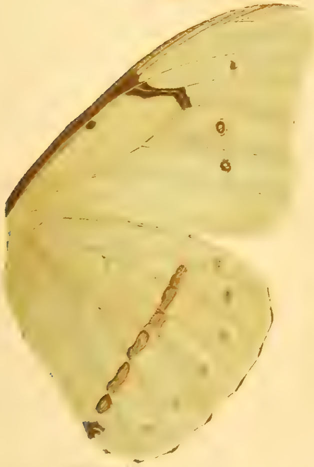
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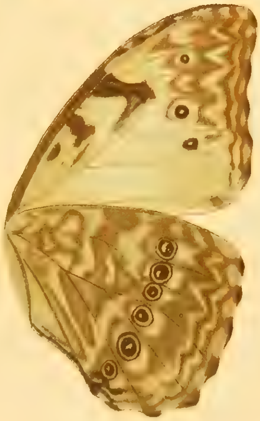
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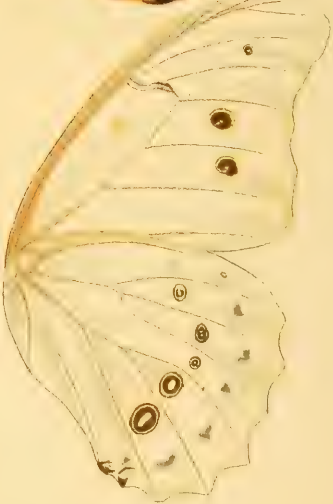
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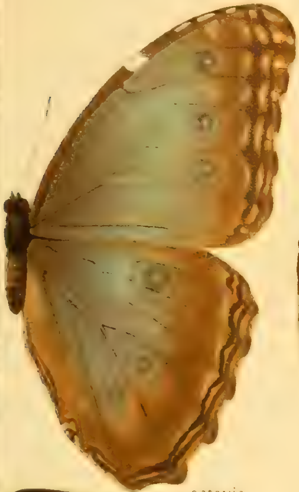
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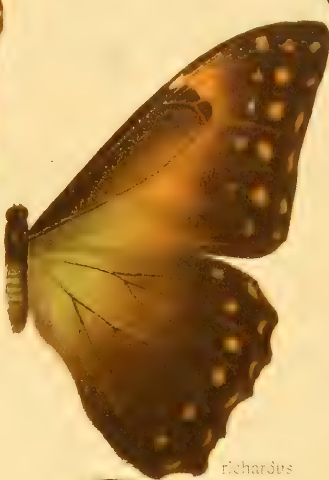
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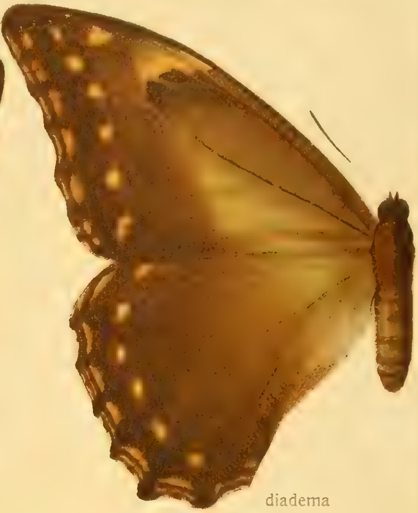
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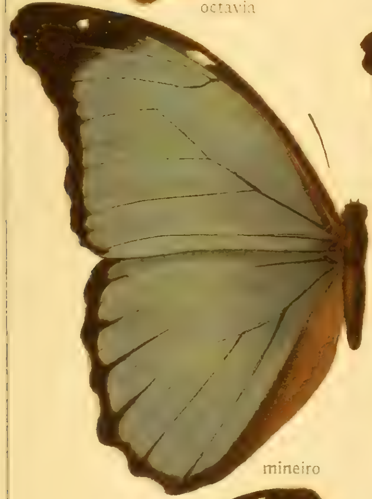
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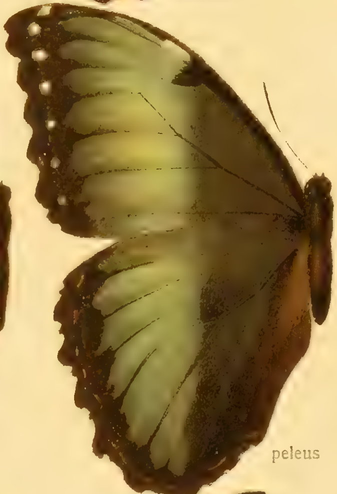
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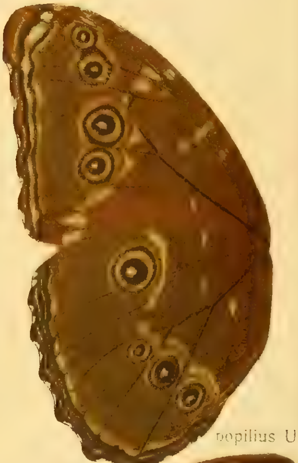
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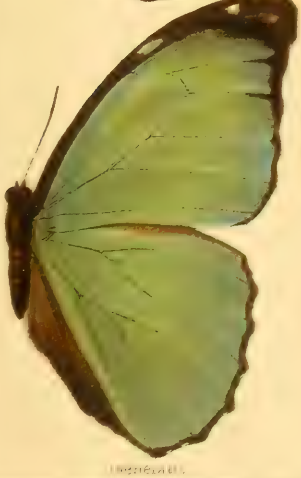
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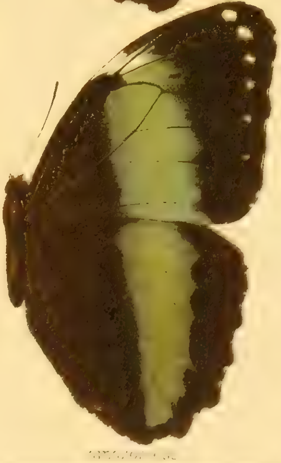
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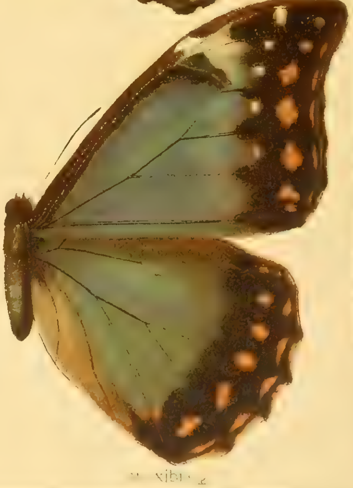
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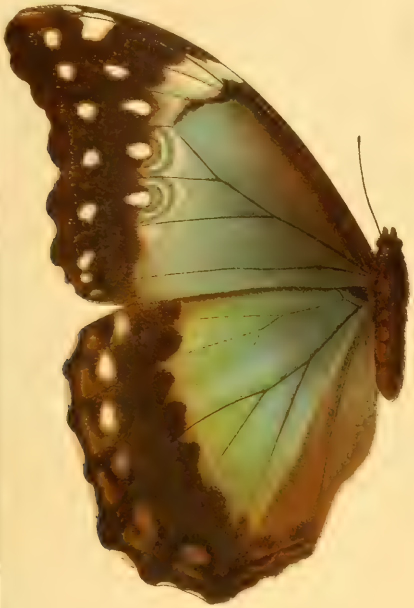

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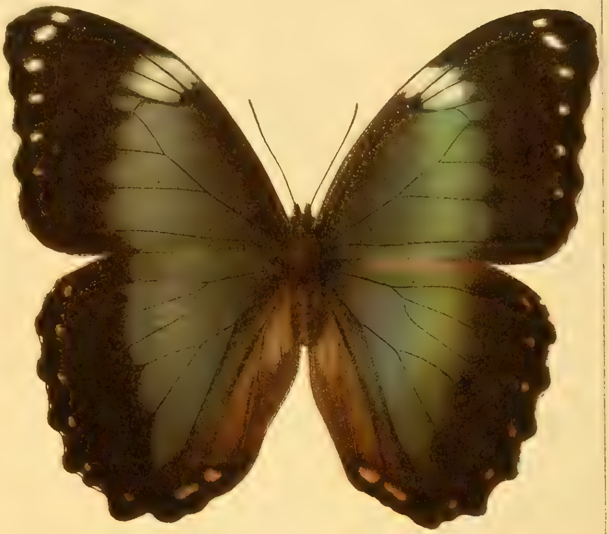

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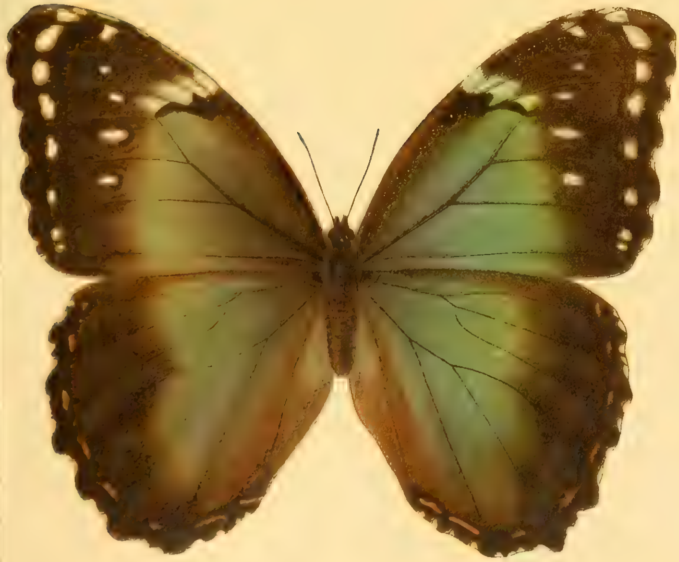

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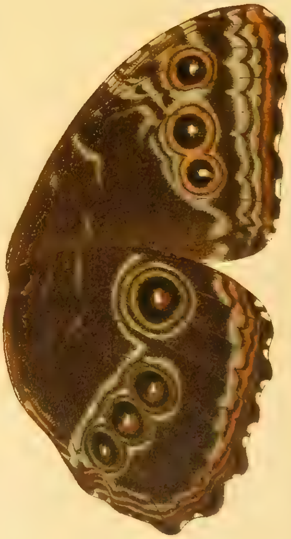

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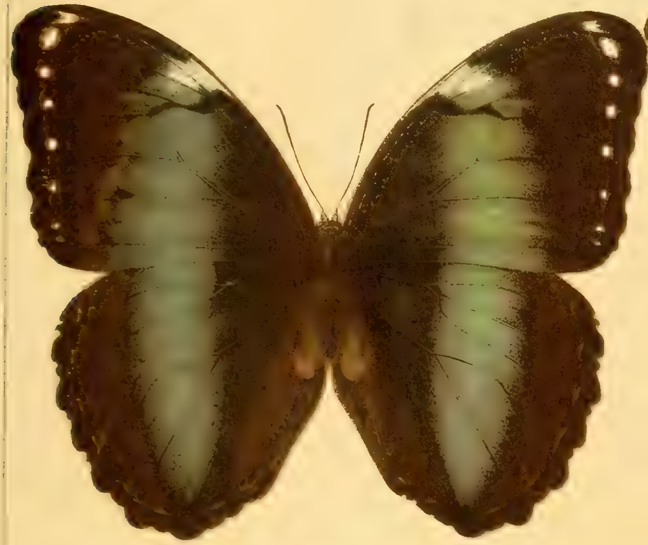

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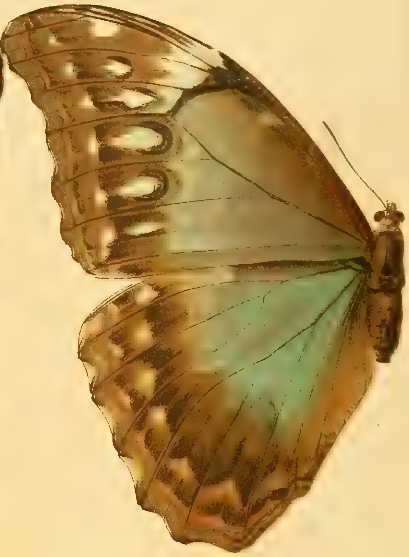

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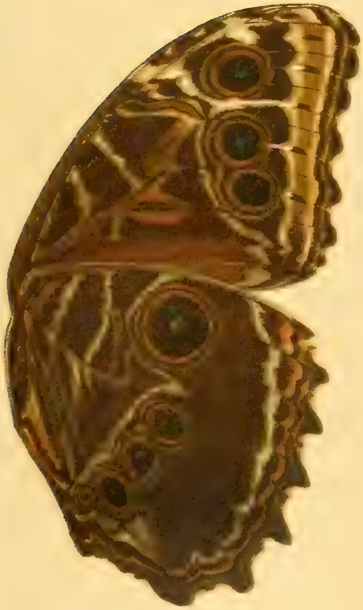

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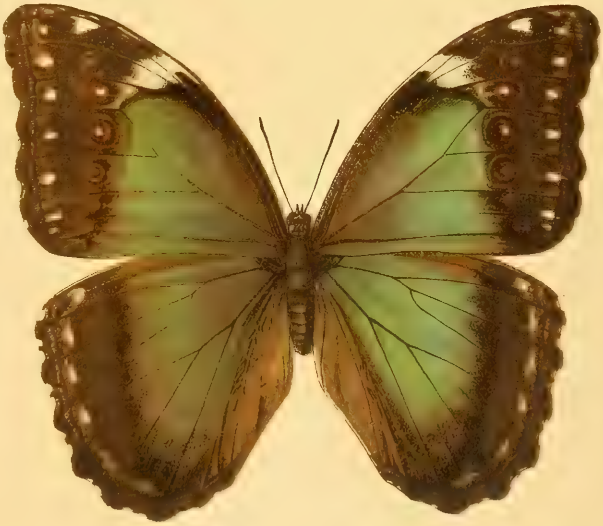

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